VAX Software Source Book

Volume 1 Accounting to Health Care

Third Edition, January 1986

digital

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Accounting to
Health Care

VAX
Software Source Book

Third Edition

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First edition, June 1984
Second edition, January 1985
Third edition, January 1986

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A-to-Z	DIBOL	RSTS
ALL–IN–1	MASSBUS	RSX
BASEWAY	MicroPDP–11	RT
DEC	MicroPower/Pascal	ULTRIX
DECmate	PDP	UNIBUS
DECsystem–10	P/OS	VAX
DECSYSTEM–20	Professional	VMS
DECUS	Q-bus	VT
DECwriter	Rainbow	Work Processor

TSC P3V3

Contents

Reference Guides

Introduction: Resources for VAX Users

DIGITAL takes pride in presenting the *VAX Software Source Book, Third Edition*, to help you find VAX solutions to your application needs. This book describes more than 2500 VAX software products available for the VAX family of computers. Whatever your software need, this book provides a wealth of information about the software products you can use on your VAX computer.

System Software Options

DIGITAL's VAX computers bring the high performance of 32-bit systems to a wide range of users, applications, and budgets. The powerful VAX architecture is fully compatible among all VAX computers — from the desktop MicroVAX II to the large VAX 8600 and VAXcluster computer center systems. That architecture encompasses a variety of DIGITAL system software options.

VAX/VMS: The general-purpose operating system for VAX systems, VAX/VMS provides both a rich development environment and a variety of tools for writing, compiling, and linking programs and building libraries of source, object, and image modules. The high-level, native-mode language processors — Ada®, APL, BASIC, BLISS, C, COBOL, CORAL 66, DIBOL, FORTRAN, LISP, MACRO, Pascal, PL/I, and RPGII — produce object code and take advantage of the VAX instruction set and 32-bit architecture. These language processors are commonly used in engineering, scientific, commercial, instructional, and systems applications. User applications can use more than one language, and application modules written in more than one language can be combined, provided they satisfy certain criteria.

MicroVMS: The MicroVMS operating system — VAX/VMS repackaged for the microcomputer environment — supports MicroVAX I and II and VAXstation I and II, is fully compatible with VAX/VMS, and is suitable for both time-sharing and production environments. MicroVMS provides transparent instruction emulation for all native VAX instructions not implemented in the MicroVAX hardware.

Ada® is a registered trademark of the United States Government (Ada Joint Program Office).

VAXELN: A VMS-layered toolkit, VAXELN is most often used to develop stand-alone, statically defined applications that require large address space and high speed. VAXELN can be used for real-time applications in factory-automation, dedicated CAD/CAM, and large-scale data collection and reduction systems. VAXELN supports MicroVAX II as both a development system and a target system and runs on a host system under either VMS or MicroVMS.

ULTRIX–32: DIGITAL's ULTRIX–32 is an interactive, demand-paged, virtual-memory, time-sharing operating system based on Berkeley's 4.2 BSD UNIX*. Besides performing the same functions as UNIX*, ULTRIX–32 provides a wide range of support service options and installation and configuration without source code. In addition, DIGITAL has repackaged the technical documentation and offers UNIX* sublicensing for object code.

ULTRIX–32m: The ULTRIX–32m operating system, an ULTRIX–32 subset for the MicroVAX, is user installable and takes advantage of the VAX demand-paged, virtual-memory architecture. Since both ULTRIX–32 and ULTRIX–32m derive from the same system, ULTRIX–32m programs can run with little or no modification on larger VAX systems. ULTRIX–32m software is available in both single-user and multiuser versions.

Productivity Tools

DIGITAL offers a variety of productivity tools that enable VAX users — from office personnel to programmers — to maximize their computing efficiency.

ALL–IN–1: The components of this multifunction office system product set provide a range of capabilities and the flexibility needed to solve a wide variety of business problems. ALL–IN–1 can also integrate other business-oriented applications developed by DIGITAL, customers, and third-party vendors. In addition to the generic office applications provided through the ALL–IN–1 Office Menu, ALL–IN–1 provides an administrative system with full-function word processing — the WPS–PLUS/ALL–IN–1 and DECspell options — a full set of applications for the sales department — ALL–IN–1 System for Sales and Marketing — and communications support — ALL–IN–1 Voice Messaging Support and DECtalk Mail Access.

VAX Information Architecture: This software architecture helps individuals, whatever their occupation and level of expertise, to improve their productivity. The VAX Information Architecture products — ACMS (Application Control and Management System), CDD (Common Data Dictionary), DATATRIEVE, DBMS (Data Base Management System), FMS (Forms Management System), Rdb/VMS (Relational Database Management System), TDMS (Terminal Data Management System), VTX, and VALU — work with one another

* UNIX is a trademark of AT&T Bell Laboratories.

across the entire spectrum of VAX computers to provide flexible solutions to your information management needs. You can choose the components you need to get started and add capabilities as your needs change.

VNX: VNX is DIGITAL's solution for users who want both a familiar UNIX* programming environment and VMS productivity features. The VNX set of productivity tools – DEC/Shell, DEC/CMS, DEC/MMS, and C – enable programmers to use UNIX*-like commands and procedures on VAX computers. Commands can be created that tailor programming routines to run in an interactive environment, thereby retaining most of the benefits of the UNIX* operating system while taking advantage of all VMS software products and utilities.

DIGITAL Services and Publications

DIGITAL provides a range of services and publications to meet your VAX computing needs.

DECUS: Supported in part by DIGITAL, the Digital Equipment Computer Users Society (DECUS) provides a forum for the exchange of computer information. This book lists VAX software products from the DECUS Program Library, a clearinghouse for software applications and utilities written and submitted by users. The Program Library supplies products and information "as is" and distributes products for nominal service charges. Neither DECUS nor DIGITAL provides software support for DECUS products.

For information on how to join DECUS or to obtain a DECUS Program Library catalog, write to:

DECUS Membership
219 Boston Post Road
BPO2
Marlboro, MA 01752–3011

Integration Tools Clearinghouse: Information about the integration and migration of TOPS–10 and TOPS–20 applications to VAX/VMS-based systems is available through the Integration Tools Clearinghouse. Free to DECsystem–10 and DECSYSTEM–20 users, this service consists of a tools library and an open-ended communication channel. DIGITAL distributes the software tools associated with the Clearinghouse "as is" – whether developed by DIGITAL, customers, or third-party vendors.

You can access the Clearinghouse over ARPAnet host DEC–MARLBORO or through a 300- or 1200-baud modem by dialing 1–617–467–7437 in the United States. At the system prompts, enter the account name LCG.CUSTOMER and the password CUSTOMER; then press RETURN.

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* UNIX is a trademark of AT&T Bell Laboratories.

Local Sales Office: Your local DIGITAL sales office is a valuable source of information and service. Your local sales representative can help you purchase DIGITAL software and hardware products, give you information about DIGITAL's role in customizing software or developing a product on a contract basis, order copies of DIGITAL publications, and obtain additional free copies of this book or other DIGITAL Software Source Books. For the location of your nearest DIGITAL sales office, dial 1–800–DIGITAL.

Publications: The following publications may be of use to VAX users:

- *Supermicrocomputer Handbook*
- *VAX Architecture Handbook*
- *VAX Hardware Handbook*
- *VAX Systems and Options Catalog*
- *VAX/VMS Languages and Tools Handbook*
- *VAX/VMS Software Information Management Handbook*
- *VAX/VMS Systems Software Handbook*

You can order a copy of these publications either from your local DIGITAL sales office or from:

Digital Press
12A Esquire Road
Billerica, MA 01862–2587
1–800–343–8321

You can order DIGITAL Software Source Books through your local DIGITAL sales office or by completing and mailing a business reply card located at the end of Volume 2. If the cards are missing, write to:

Digital Equipment Corporation
Printing and Circulation Services
Literature Inquiry Fulfillment
10 Forbes Road, NRO3/M1
Northboro, MA 01532–2597

VAX Software Source Book

This 2-volume collection of VAX software products consists of 38 industries/generic disciplines containing software product descriptions and a series of reference guides to the software products. Following the reference guides are instructions for submitting new entries to the Software Source Books, the Entry Form for submitting entries, and two reader reply cards — one a comments/questionnaire form and the other a form for ordering Software Source Books and being placed on our mailing list.

Industries/Generic Disciplines: These categories of software products, listed in the Contents, are arranged alphabetically. Software product descriptions are listed alphabetically within each industry/generic discipline.

Software product descriptions appear in the following format:

① **Software Title:** A typical product name is an acronym followed by the full title in parentheses.

② **Operating System:** This portion of the entry lists operating systems on which the software product runs. When planning to purchase a software product, you must consider what operating system you have. In that way, you ensure that the software product that you purchase will run on your hardware.

③ **Keywords:** Keywords define a software product and give you some idea of the product's function and application, without your having to read the entire description.

④ **Description:** This portion of the entry presents the product's features and capabilities.

⑤ **Price:** Unless otherwise indicated, the cost is expressed in U.S. dollars and is frequently given as a range. The price depends on such factors as maintenance costs, your requirements for support and customization, the size and number of computers on which you intend to run the product, and in the case of multimodule products, which modules you require and the number of people using the software.

⑥ **Contact:** Call or write to the contact person or company for more information on the software product. The telephone number, company name, and address are listed.

A typical entry follows:

① **RenProMan (Rental Property Management)**

② **Operating System:** ULTRIX–32, VMS

③ **Keywords:** • Accounting • Data collection • Property management • Scheduling

④ This property management system enables real estate management personnel to collect, organize, track, and analyze rental property data. This system consists of two modules. TENANT maintains records of tenant names, past and forwarding addresses, security and credit check information, rental charges and scheduled increases, lease dates, security deposits, maintenance history and utility usage, and projected unit availability. The second module, ACCT, performs all accounting functions, such as accounts payable and receivable, loan amortization, and depreciation of fixed and movable property. The system is ideal for residential and commercial property management personnel engaged in managing income properties for themselves or for other investors.

A version of this product is available for the PDP–11 computer.

⑤ **Price:** $3000–$32,000

⑥ **Contact:** Lawrence E. Alleyne, Boardwalk Manager
(609) 345–6789
BOARDWALK SYSTEMS, INC.
108 N. Pennsylvania Avenue
Atlantic City, NJ 08401–4714

Reference Guides: The information in this book is referenced in several ways:

- The **Guide to Contents** lists the software product titles alphabetically within each industry/generic discipline and indicates whether each product runs on ULTRIX–32 and VMS.
- The **Keyword Cross-Reference Guide** lists the software product titles alphabetically according to keyword usage and indicates whether each product runs on ULTRIX–32 and VMS.
- The **Product Title List** lists the software product titles alphabetically, without regard to a product's industry/generic discipline or keyword usage. Products in **bold** type are available through DIGITAL.
- The **Vendor Product Title List** alphabetically lists non-DIGITAL product suppliers and their products.
- The **Index** indicates keyword usage within each industry/generic discipline.

Submitting Entries for Software Source Books: If you wish to include your software product in one or more of DIGITAL's Software Source Books, read "Submitting Entries for Software Source Books" at the end of Volume 2 and complete the entry form following those instructions.

If the form is missing, request a form by writing to:

Editor, Software Source Books
MLO5–5/E45
Digital Equipment Corporation
146 Main Street
Maynard, MA 01754–2571

or by calling (617) 493–3200.

Accounting

Robert Pyle

ABACUS

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • Billing • Payroll

This series of on-line and fully integrated systems is designed to perform many key functions for an accountant in private practice:

- Client Accounting and Audit Assist produces interim financial and management information for the accountant's clients.
- Accountant's Time and Billing System controls billing and provides management information for more timely and profitable business decisions.
- Accounts Receivable System controls cash and produces sales analysis and other management information.
- Accounts Payable, a voucher-based system, reduces A/P operational costs, eliminates duplicate payments, and plans for cash requirements.
- Payroll System maintains employee payroll information, performs payroll calculations, and produces payroll reports in a timely and accurate fashion.

Other ABACUS modules include Estate, Financial, and Tax Planning; Pension and Profit Sharing; Word Processing; and Graphics.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $100,000
Contact: Richard Bowe, Marketing Manager
(603) 898–7000
ASA INC.
3 Speen Street
Framingham, MA 01701

Abax Depreciation System

Operating System: VMS
Keywords: • Cost accounting • Fixed assets • Inventory • Maintenance

This comprehensive tool analyzes current fixed assets and determines the feasibility of adding assets. The system calculates at the point of data entry and provides a monthly depreciation report, year-to-date disposition and purchases reports, a projected-depreciation report, and an amortization schedule. All current depreciation methods are included.

A version of this product is available for the PDP–11 computer.

Price: $2000
Contact: Charles R. McKown, President
(316) 663–5041
ABAX COMPUTER SYSTEMS
P.O. Box 1097
Hutchinson, KS 67504

ABLE® Client Writeup System

Operating System: VMS

Keywords: • Financial management • General ledger • Payroll • Report writer

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This interactive reporting system enables accountants to create financial or management reports/analyses to gauge business performance. ABLE also permits entry of employee payroll information and automatically prepares quarterly returns and year-end W–2 forms.

ABLE's nonrestrictive account-numbering scheme gives each client its own chart of accounts. Thus, each entity of a multicorporate client could have its own account-numbering scheme. Data can be entered in random order, and provision is made for entering adjustments to prior accounting periods. Data entry under ABLE is carefully controlled by audit reports and edit lists, including the Transaction Edit List, the General Journal, the Payroll Journal, and the detailed General Ledger.

ABLE's powerful report writer and generator prepares the reports and analyses and enables the computer to automatically make and post such entries as standard adjusting entries, accrual entries, depreciation entries, depletion entries, and the like. Virtually any report or analysis that a qualified accountant might prepare is prepared automatically. The system prorates, calculates, allocates, and figures percentages (using any number of 100% figures) — all without "people" intervention.

A version of this product is available for the PDP–11 computer.

Price: $11,500 – $25,500

Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

ABLE® Receivables and Billing System

Operating System: VMS

Keywords: • Accounts receivable • Billing • Data base management • General ledger

Distribution media: 9-track 1600 bpi magnetic tape.

This menu-driven, operator-oriented system with interactive entry/edit is parameterized by "site standards" and provides:

- Registers for cash receipts and credit/discount
- Automated invoice preparation and invoice register

- Cash receipt distribution across corporate lines
- Aging reports, customer statements, and journal register
- Customer lists — alphabetical, numeric, long form, short form
- Collection and sales histories
- Automatic "standard bill" items, selective calculation and entering of late charges, and posting to general ledger
- On-line master file maintenance
- Mailing labels with multiple reprints
- Reruns without disk changes
- Optional check digit control
- Input sequence number control
- Unlimited chart of accounts
- Imprint headers for multiple users
- Report on average collection days
- Limited aging report for credit department
- Delete control over active accounts
- Easy clearing of spooled files after successful print
- "View or que"
- Input batch control
- Customer open items/or balance forward selectively
- Customer inquiry

A version of this product is available for the PDP–11 computer.

Price: $3500 – $5000
Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

ABLEpayables

Operating System: VMS
Keywords: • Accounts payable
Distribution media: 9-track 1600 bpi magnetic tape.

This flexible on-line interactive accounts payable system can be used stand alone or interfaced with other systems. The system has user-controlled options and does not require a programmer for adaptation to a time-share environment. Those options include top- or bottom-stub checks, saving vendor/invoice history, general ledger interfacing, vendor check-digit numbering, preprinted (customized) check forms, and entry of purchase order numbers.

The cash-requirements report gives management control over check issuance and, therefore, cash flow. Checks may be printed selectively, based on the availability of funds. ABLEpayables supports partial payment, hold payment, manual checks, voided checks, and changes in due dates. Screen-formatted entry encourages user acceptance, decreases operator training time, and ensures data integrity.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $5000

Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

ABLEpayroll — Interactive

Operating System: VMS

Keywords: • Payroll • Taxes

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This interactive system computes, prints, and reports multioffice and multistate payroll. Screen-formatted entry encourages user acceptance and data integrity. A full complement of reports to meet both management and government requirements is generated. Payroll in a new quarter cannot be run until the 941 information from the previous quarter has been printed and cleared. Various tests are performed to ensure that employees are reported on a state quarterly form. An employee with year-to-date earnings cannot be deleted. The user can control whether other earnings are taxable or nontaxable. If the earnings are taxable, the system will pay overtime based on a "computed" average hourly rate as prescribed by the Federal Wage and Hour Law. The system allows unlimited deductions. A menu selection is provided so the user can maintain FICA, U.C., and SDI rates; page and form size; and check kind without programmer assistance.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $5000

Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Accountant II Accounts Payable System

Operating System: VMS

Keywords: • Accounts payable • Cost accounting • Financial analysis • Report writer

This easy-to-use and versatile system functions with the Accountant II General Ledger and Project/Job Cost systems. The Accounts Payable System lets you display all open invoices for a vendor or display all the disbursements made for the month by pressing a few buttons. The system automatically produces a cash-requirement report displaying the

cash requirements for the current week and next four weeks. The system also prints checks, produces expense distribution reports for general ledger, posts expenses to projects, and provides reports for accounts payable expense distribution, check registers, cash requirements, aged trial balance, and checks.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Richard Northrup, Sales Director
(212) 221–2517
COMPUTRON BUSINESS SOLUTIONS, INC.
701 Seventh Avenue, Suite 9W
New York, NY 10036

Accountant II Accounts Receivable System

Operating System: VMS
Keywords: • Accounts receivable • Report writer • Retail • Wholesale

This system can run stand alone or with the Accountant II Order Entry, General Ledger, and Project/Job Cost systems. The system's inquiry capabilities let you display all unpaid invoices for a customer by pressing a few buttons. Cash is applied directly to a customer's open invoices with a single keystroke. A cash application journal balances to the month's deposits. Statements can be run at any time during the month. Both midmonth and end-of-month statements can be produced and printed on request. Invoicing can be performed as a by-product of the Order Entry System or directly by the Accounts Receivable System. In either case, invoices are posted to the Open A/R File. The system provides daily and monthly invoice registers, invoices, statements, aged trial balance, cash journals, and salesperson commission reports.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Richard Northrup, Sales Director
(212) 221–2517
COMPUTRON BUSINESS SOLUTIONS, INC.
701 Seventh Avenue, Suite 9W
New York, NY 10036

Accountant II General Ledger System

Operating System: VMS
Keywords: • Financial analysis • General ledger • Report writer

This easy-to-use and versatile system functions with the Accountant II Accounts Payable and Accounts Receivable systems. The General Ledger System uses your chart of accounts; you do not need to modify your account numbers.

You can produce consolidated financial statements by pressing a button. You can even consolidate individual statements from companies with dissimilar charts of accounts.

You can alter the sequence and form of your financial statements without any programming changes. You can print both a detail statement and a summary statement automatically.

The system accepts entries automatically from the Accountant II Payables and Receivables systems. The entries can be entered into the general ledger on a detail or a journal entry basis.

The system provides journal listings, trial balance, general ledger, financial statements, and budget reports.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Richard Northrup, Sales Director
(212) 221–2517
COMPUTRON BUSINESS SOLUTIONS, INC.
701 Seventh Avenue, Suite 9W
New York, NY 10036

Accountant II Purchasing System

Operating System: VMS
Keywords: • Inventory • Purchasing • Report writer • Retail

This purchasing system accepts order information, prints and tracks purchase orders, and updates the inventory when the orders are received. The receiving function is performed on line on an exception or a blind receiving basis.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Richard Northrup, Sales Director
(212) 221–2517
COMPUTRON BUSINESS SOLUTIONS, INC.
701 Seventh Avenue, Suite 9W
New York, NY 10036

Accountant's Time and Billing System

Operating System: VMS
Keywords: • Billing • Financial planning • Scheduling

Distribution media: magnetic tape, RL02.

This package provides for all aspects of the time and billing function for a certified public accounting firm. The system allows for multimatter and multifunction controls with numerous reporting functions. The system provides for retainer billing, fixed-fee billing, and time and

expense billing on a variety of bases. The month-end reporting provides for expense and revenue along with productivity analysis for both responsible and reporting producers.

The system also permits the designation of any or all matters as time-budgeted items, permitting their tracking and analysis. Data base summary screens permit the rapid assessment of the financial position of the firm. Financial modeling screens permit the accountant to model the firm and thus set realistic goals in the planning for growth of the firm.

This software was designed, developed, and implemented by a certified public accounting firm for public accounting firms.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $4500
Contact: Lee Cates
(615) 523–0553
DORROUGH PARKS & CO.
119 Summit Hill Drive
Knoxville, TN 37902

Accounting Business Software

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • Billing • Order entry

ABS packages perform specific business functions and merge, sort, and rearrange information. Data that is keyed into the computer is used to update several files and reports simultaneously. For example, a sales order entry checks both customer and inventory records. The resulting invoice automatically reduces the inventory file, creates an accounts receivable record, and posts the transaction for general ledger.

In addition, ABS software features security, audit trails, multiple-user access, multiple-branch capability, a menu of functions for each program, and instruction and reference guides.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $9500
Contact: Thomas L. Mitchell, President
(312) 381–2004
ABS ASSOCIATES, INC.
22 Witt Road
Barrington, IL 60010

Accounting, Integrated

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Cost accounting • Manufacturing • Property management • Real estate

This fully integrated on-line multiuser UNIX*-based accounting system includes A/P, Billing-A/R, G/L, Inventory Control, Job Costing, Order Processing, Purchase Order Accounting, Sales Analysis, Cost Estimating, and Payroll. The features of each module are listed under individual headings.

True multiuser design allows concurrent use of any program. Plus, multicompany/multidivision support is built into all programs, so that the user may be assigned to a predefined company/division or allowed the option to specify company/division.

All information is kept up to date. Timely information is ensured through automatic G/L update from all modules. All management reports may be run at any time for any fiscal period (past or current). Processing of new month's information may proceed while the prior month is being "closed." A print key provides a hard copy of any screen image through the system printer.

Printed transaction logs provide a complete audit trail of every transaction. Transaction logs include error codes highlighting invalid data fields. Programs contain extensive checks for error conditions and record them in an error log file. Supplemental security at menu level limits access to unauthorized programs.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Accounting Package

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Order entry

This accounting system, developed by Compu-Share, provides general ledger, accounts payable, accounts receivable, order entry, payroll, job costing, and inventory control. The user-friendly menu-driven and table-driven modules, with versatile tailoring capabilities, provide simultaneous update capabilities and generate reports up to 132 characters wide on terminals or printers. The modules are interactive and have password protection and a wildcard reporting function, and the restart feature preserves data in a posting session in the event of a system crash. The user can design printouts to fit preprinted forms. Installation, including tailoring and system manager training, can be completed in a day.

With the General Ledger module, posting can be done without requiring month-end or year-end closing. Order Entry defines each product by code, description, and department, and customers can be validated by either number or name. Accounts Receivable allows both open-item and balance-forward accounting, on a customer-by-customer basis. With Accounts Payable, the user can pay invoices individually or by group. Payroll provides a variety of reports, including rate review, sick leave, terminated employee, rate change, vacation accrual, general ledger distribution, and quarterly reports. Job Costing is designed for general contractors and subcontractors or other builders of projects. Inventory Control offers a choice of FIFO, LIFO, or weighted-average cost as a basis for computation.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Hilda Daniel
(408) 257–7700
NATIONAL INFORMATION SYSTEMS
20370 Town Center Lane, Suite 130
Cupertino, CA 95014

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Financial analysis • General ledger

The ADD Accounts Payable system provides a flexible vendor file that allows for variable discount/payment terms, multicompany internal distributions for general ledger reports, and a history of vendor activity detailing purchases and payments on an open-item basis. Vouchered checks are produced and discounts computed automatically. The system includes forecasts of future cash requirements, payables trial balance, aging of open invoices, bank reconciliation, disbursement reports, and general ledger distribution by account and automatically interfaces with ADD's General Ledger system.

The system can record additional invoice information, such as units purchased, retail invoice value, and a free field text entry to record comments about a given invoice.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $5000
Contact: Bruce A. Bott, President
(201) 584–4026
ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Audit
Memory required: 1MB.

This package provides complete accounts payable processing, including general ledger distribution reporting and interface. Data is entered in on-line conversational mode, with operator prompting. Accounts Payable provides complete audit trails; selective check writing; an open payables list, showing all outstanding payables; check reconciliation; aged reporting of payables; cash-requirements reporting; and multiple expense months for invoices.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $15,000
Contact: Marketing Department
(502) 491–9820 or 1–800–626–6268
AMCOR COMPUTER CORP.
1900 Plantside Drive
Louisville, KY 40299

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Cost accounting • Purchasing
This menu-driven system, which includes a job costing feature, provides printing of cash disbursements by vendor, with default capability at voucher entry time; check verification reports before printing; check printing with stub detail; a check register showing computer, handwritten, or voided checks; automatic voucher number assignments; batch control totals; and autoposting to A/P open file and distribution file. This system prints accounts payable, aged trial balance, GL/job, and job distribution reports. Accounts Payable interacts with other Armadale business packages programmed in Pascal II.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3000
Contact: Michael G. Sifton
(416) 477–8000
ARMADALE SYSTEMS INC.
Toronto Buttonville Airport
Markham, Ontario L3P 3J9
Canada

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable

This module maintains master files for vendors, processes vendor invoices and payments, makes appropriate journal entries automatically, and prints various management reports: vendor listings and account status, invoices, scheduled payments, expenses, agings, cash requirements, and deposits. Vendor invoice and disbursements journals and a check register are also produced. Special forms include checks and check stubs and limited 1099 capabilities.

An optional job cost interface automatically allocates costs, including overhead, to appropriate jobs. An optional interface with purchase order processing automatically matches invoices to purchase orders and automatically reduces open commitments on each purchase order as invoices are received and acknowledged.

A separate processing is available for subcontractors.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Janna McMillan
(617) 275–5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Billing

This application provides the capability to record and list all payables incurred by the firm for all invoices from vendors and interfaces to CRS's Management Program 1000 and 2000 software applications, as well as to General Ledger.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $6000
Contact: Suzanne Gunnells
(215) 825–7500
COMPUTE–R–SYSTEMS, INC.
5165 Campus Drive
Plymouth Meeting, PA 19462

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Financial management

This system contains the vendor master, the invoice file, the recurring file, and the holdback file. The vendor master stores supplier information such as a supplier number, name and address, and year-to-date balances. The invoice file, recurring file, and holdback file retain individual invoice and payment transactions consisting of a vendor number, amount, and so on. The vendor file and the invoice files (invoice,

recurring, and holdback) integrate to produce vendor reports and inquiries. At month end, after vendor reports are printed, paid invoice transactions are moved to the history file, leaving only unpaid invoices.

Invoice features include multicompany A/P support and the ability to enter manually paid invoices to the A/P system. Thus, each vendor may be assigned default terms that may be overridden during invoice recording. Invoices that occur regularly may be set up and released for payment when required. However, a percentage of the invoice may be held back and released when required. A flexible check-writing routine allows invoices due to be paid using selected criteria. The system allows reconciliation of cashed checks and provides an outstanding check list. Aging is based on invoice dates.

The A/P interfaces to the General Ledger. The user may set up a table of G/L account numbers for each company. Statistical data may be recorded during the distribution of the invoice and passed on to the G/L.

All reports allow various selection options and printing ranges. Reports can be printed, spooled to disk, or viewed on screens. Reporting features on-line inquiries, history files, a cash-requirements report, and summary and detail aging reports.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $15,000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Report writer

This system prepares invoices for payment, prints checks, and provides up-to-date information on cash requirements. The system is flexible enough to handle almost any type of invoice payment — partial, complete, even prepaid. The Accounts Payable system permits control of each flow, based on the client's unique requirements.

Some significant features and reports are:

- Vendor listing, alphabetically or numerically, and vendor analysis
- Expense account cross-reference
- Cash requirements, aged analysis, and pre-check-writing reports
- Payment deferral
- Automatic check writing

- Optional interface to the bank reconciliation program and to the job cost module for updating costs charged to specific job cost breakdowns
- Complete handling of subcontract retainage, with flexibility in both calculating and paying the retained amounts

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 East Gregory Street
Pensacola, FL 32501

Accounts Payable

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Accounts payable

This integrated accounts payable system goes from purchase order to packing slip to invoice to check. Manual or automatic check printing can be done. Partial payment of invoices and multiple bank accounts are allowed. The system includes a series of reports for accounts payable, including balance due; projected cash flow by due date or discount date; vendor reports, including or excluding packing slips; cash disbursement reports; and bank account reconciliation and automatic posting.

Accounts Payable is written in C language and uses the public domain Ingres data base written by the University of California at Berkeley. Binary and source codes are available for UNIX* Berkeley 4.1 and 4.2. The source code is available for all others.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $5000
Contact: Fred Potthoff
(612) 941–9470
FARGO ELECTRONIC SERVICES, INC.
7150 Shady Oak Road
Eden Prairie, MN 55344

Accounts Payable

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Accounts payable

This fully integrated, on-line, multiuser UNIX*-based accounts payable system supports full and partial payments, debit and credit memos, adjustments, allowances and refunds, and manual and separate checks. A prepay edit list allows final review before checks are written. The system maintains all information to print 1099 forms for vendors and uses a flexible "open-item" A/P design. Separate categories of A/P,

allowing analysis of total payables by type (G/L account number), are maintained. Voided or unused check numbers may be entered to assist in accounting for all checks on the check register.

Also available are a check-reconciliation system, a print key providing hard copy of any screen image through the system printer, true multi-user design for concurrent program use, timely information by automatic G/L update, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Data dictionary

This system provides all the forms, programs, and procedures necessary to perform the accounts payable function. Menu orientation makes this system easy to learn and simple to use. With the system's effective error reporting and interactive editing of input information, most errors can be identified and corrected before reaching the main system.

Reviewed annually by outside accountants, this system has a complete, easy-to-follow audit trail and is continually kept up to date. Comprehensive reporting includes payables agings, cash requirements forecasts, detail and summary check registers, payables trial balances, ledger payables expense distribution reports, and several reports showing paid and/or unpaid invoice information.

The system may be run stand alone or may be interfaced with a companion general ledger system. The documentation includes detailed operating procedures, flow diagrams, file layouts, report samples, program operating instructions, and a dictionary of data and terms used in the system. Complete support and training are available.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $7500
Contact: Sharen Robinson, Sales Assistant
(219) 935–5121
PLYCOM SERVICES, INC.
P.O. Box 160
Plymouth, IN 46563

Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Office systems • Report writer

Accounts Payable operates as a voucher system to accumulate information on vendor invoices and other payable obligations. Voucher entries generate unique voucher numbers for audit and control purposes.

The system provides payment selection key due date and individual invoices on vendors; allowance for partial payments; handling of prepayments for checks already paid as well as checks scheduled to be paid; unlimited general ledger expense and job costing distribution for each voucher; inquiry into month-to-date or year-to-date purchases, payments, and current balance; creation of accounts payable and cash disbursement journal entries; and access to any journal of any month for current fiscal or prior year.

The reporting features are vendor listing; mailing labels; voucher distribution; voucher history; precheck pay register; check writing register; check printing; journal listing for accounts payable, cash disbursement, and job costing; age analysis; and an open-invoice report.

Accounts Payable allows multiple users and provides password security.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Linda Wingfield, Software Product Manager
(919) 766–0571
RESOURCE SYSTEMS CORP.
P.O. Box 1546
Clemmons, NC 27012

Accounts Payable (Canadian)

Operating System: VMS
Keywords: • Accounts payable • Data dictionary
• Query facilities

This system, designed to work with the Computer Management System, is table driven, with all files processed by data dictionaries. The system can be adapted to cover a wide range of requirements and to meet the needs of any Canadian organization. The system may also be used as is.

Accounts Payable maintains the supplier master in numeric and alphabetic sequence for inquiries. Image records of checks and invoices are kept on line and are cross-referenced, so that inquiries are allowed by check date or number and invoice date or number. The system allows invoices to be recalled for payment each month.

Accounts Payable will automatically purge data by date as required — annually or semiannually. The automatic transfer of accounting data to other systems — for example, G/L — must be added to the system to meet the requirements of each user.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Bill Hay
(204) 888–5253 or 832–3680
BILL HAY & CO.
1164 Crestview Park Drive
Winnipeg, Manitoba R2Y 0W6
Canada

Accounts Payable System

Operating System: VMS
Keywords: • Accounts payable

This system, for all industries, is accessed through a CRT, where data is input and verified through formatted screens. No updates can take place until all data input is balanced and verified.

The system includes formatted data input through a CRT located in the client's office, verification of input data before acceptance, checks produced under the client's control through the CRT and associated printer, partial payment of invoice, distribution of invoice by account and General Ledger system, summary of general ledger entries created by the Accounts Payable system and accepted by the General Ledger system, and customized reports, including aged open invoices, summary by vendor, and check register, which can be interfaced directly to the bank's Automated Account Reconcilement system.

Price: $6000 – $12,000
Contact: George F. Cooper
(412) 355–2868
PITTSBURGH NATIONAL BANK
Financial Systems Group
Fifth Avenue and Wood Street
Pittsburgh, PA 15222

Accounts Payable/Purchase Control System

Operating System: VMS
Keywords: • Accounts payable • Fixed assets
• Project management

Memory required: 160KB minimum.

This system extends management control over cash flow from the time a purchase order is issued until the check clears the bank. The system offers multicompany processing and cash management capabilities. Discounts and due dates are automatically calculated. The forecast of future commitments is based on invoiced and uninvoiced purchase

order items. Automatic check reconciliation, edits, balancing controls, and duplicate-invoice checking are featured. The system also includes employee expense tracking, use-tax accounting, 1099 processing, and user-defined report options. Interfaces can be tailored for general ledger, cost accounting, and inventory systems. Enhancements provide companies with the backup withholding and reporting provisions of the Interest and Dividends Tax Compliance Act. Withheld amounts are tracked by vendor and reported on 1099 forms at year end. The system is written in ANSI COBOL.

Price: $46,800 – $97,500
Contact: Chuck Jolly
(408) 730–0100
DATA DESIGN ASSOCIATES
1279 Oakmead Parkway
Sunnyvale, CA 94086

Accounts Payables

Operating System: VMS
Keywords: • Accounts payable

This program offers a complete accounts payable system.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Andrew Yasenchak
(201) 231–9400
UNITRONIX DATA SYSTEMS, INC.
50 County Line Road
Somerville, NJ 08876

Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Audit

Memory required: 1MB.

This on-line interactive system with conversational operator prompting provides complete audit trails; detail or summary trial balances for selective aging periods; statements for one, all, or selected ranges of customers; and on-line inquiry to customer and company information. Accounts Receivable can be used in a stand-alone environment or can interface automatically with the standard order processing system.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $15,000
Contact: Marketing Department
(502) 491–9820 or 1–800–626–6268
AMCOR COMPUTER CORP.
1900 Plantside Drive
Louisville, KY 40299

Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Billing • Point of sale

This menu-driven system, which includes a Billing module, provides on-line posting of invoices and receipts, open-item and balance-forward accounting, and flexible maintenance of data files, such as all relevant customer information, collect/prepaid, terms codes, ship codes, discount percentage, and month-to-date and year-to-date sales and cost of goods. The customer aging report is printed in detail or summarized by customer or salesperson. Batch totals and statement flags are displayed to control transaction flow. Accounts Receivable interacts with other Armadale business packages programmed in Pascal II.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3000
Contact: Michael G. Sifton
(416) 477–8000
ARMADALE SYSTEMS INC.
Toronto Buttonville Airport
Markham, Ontario L3P 3J9
Canada

Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable

This module maintains master files for customers/clients, processes customer/client invoices and payments, prints statements (and/or invoices) and management reports, and makes appropriate journal entries automatically. Reports and on-line inquiry include customer/client listings and account status; invoice, cash receipts, aging, cash projections, deposits, and revenue reports; and an accounts receivable journal. Special forms include invoices and statements.

The Business Information System provides full integration among job cost, accounts receivable and billing, and general ledger. You can produce invoices automatically, based on the job cost calculation of the amount earned and not billed, or manually, if your invoice amounts usually do not match the job cost calculations exactly. You can override automatically prepared invoices as well.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Janna McMillan
(617) 275–5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Billing • Credit • Financial management

This system is based on the customer master file and the open-item file. The customer master file stores such information as customer number, name and address, aging balances, and control flags. The open-item file retains individual invoice and payment transactions consisting of a customer number, invoice number, reference number, amount, and so on. The two files combine to produce customer statements, inquiries, and a variety of reports and may be used individually to produce reports such as the name and address report or the open-item file listing. The customer number is the primary index to access both files. At month end, after customer statements are printed, paid invoice transactions are purged from the open-item file, leaving only unpaid invoices.

Features include two utility programs that allow the operator to set a table of terms and a table of G/L account numbers for your company. An interest calculation allows variable rates of interest to be calculated on the aged amounts. Aging is calculated on invoice due dates that consider the terms offered. A utilities menu allows the user to reorganize A/R files, recover from power failures, and customize tables for currency types and terms and audit trail serial numbers. A variety of currencies are allowed. A currency table allows conversion to standard currency. The software handles multiple accounts receivable and interfaces to the General Ledger.

Printing features include a name and address printing program and a label printing program. Statements may be printed at variable statement cycles. All reports, including the interest report, allow various selection options and printing ranges. Reports can be directed to several printers, spooled to disk, or viewed on screens.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $15,000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Audit • Billing • Report writer

This sophisticated yet simple-to-operate method accomplishes all the general accounting functions associated with accounts receivable. Data entered once into the system updates or prepares every record, document, and management report affected, leaving a clear audit trail.

Some significant features and reports are:

- Capability of handling balance-forward and open-item records for the same client
- Automatic posting of fixed charges — up to 999 user-defined charge types — including service charges
- Automatic age analysis, statement preparation in several formats, and commission calculations
- Three invoice formats
- User-defined terms and shipping instructions
- Optional interface to the job cost module, which will update amounts billed and received by job
- Complete flexibility in calculating and paying job retainage amounts

The system provides sales reports by customer, customer type, city, county, or state and by division or tax code. Trial balance and sales history reports are included.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 East Gregory Street
Pensacola, FL 32501

Accounts Receivable

Operating System: Independent, ULTRIX–32, UNIX* (Berkeley)
Keywords: • Accounts receivable

This integrated accounts receivable system goes from invoice to cash receipts posting. Cash receipts can be posted to specific invoices, lines of specific invoices, and all invoices of a customer, paying the earliest invoice first. Debit and credit memos can be entered. A file of unused customer credits is automatically maintained and used in future receivables updates. The system includes a series of reports for accounts receivable, including balance due, account aging, customer reports, cash receipts, and projected cash flow. Automatic posting to the general ledger can also be done.

Accounts Receivable is written in C and uses the public domain INGRES, a data base written by the University of California at Berkeley. Binary and source codes are available for UNIX* Berkeley 4.1 and 4.2. Source code is available for all others.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $5000
Contact: Fred Potthoff
(612) 941–9470
FARGO ELECTRONIC SERVICES, INC.
7150 Shady Oak Road
Eden Prairie, MN 55344

Accounts Receivable

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Accounts receivable

This fully integrated on-line multiuser UNIX*-based accounts receivable system uses a flexible open-item design and prepares invoices, debit and credit memos, detail and summary aged trial balances, and daily and monthly journals and registers. The programs support full and partial payments, adjustments, and refunds and allow cash and early payment discounts. Separate categories of A/R can be automatically maintained, allowing analysis of total receivables by G/L account number. Either detail or summary A/R ATB may be printed at any time for one or more customers.

Also available are automatic calculation of monthly finance charges, maintenance of standard charges for automatic billing events, a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, timely information by automatic G/L update, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Data dictionary

This system provides all the forms, programs, and procedures necessary to perform the accounts receivable function. Menu orientation makes this system easy to learn and simple to use. With the system's effective error reporting and interactive editing of input information, most errors never reach the main system.

Reviewed annually by outside accountants, this system has a complete, easy-to-follow audit trail and is continually kept up to date. Comprehensive reporting includes several receivables agings, cash receipts forecasts, receivables trial balances, sales and receipts journals, and ledger distribution reports.

The system may be run stand alone or may be interfaced with a companion general ledger system. The documentation includes detailed operating procedures, flow diagrams, file layouts, report samples, program operating instructions, and a dictionary of data and terms used in the system. Complete support and training are available.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $7500

Contact: Sharen Robinson, Sales Assistant
(219) 935–5121
PLYCOM SERVICES, INC.
P.O. Box 160
Plymouth, IN 46563

Accounts Receivable

Operating System: MicroVMS, VMS

Keywords: • Accounts receivable

This package, programmed in VAX BASIC combined with limited use of file-driven procedures, replaces manual accounts receivable systems or updates existing automated systems. The package controls the entry of sales transactions and cash received to apply against those transactions. Every transaction is related to a specific customer account and is applied to the outstanding customer balance. All data entered is validated before being accepted by the system. The complete audit trail traces all activity to its source and determines your company's income. Salesperson activity and commission history is maintained by customer(s) and can be extended to the product level.

All system codes, reference numbers, valid print devices, file specifications, on/off switches, and default information are user accessible and easily maintained. Multiple branches and companies (with or without separate data files) are handled by the Accounts Receivable system, and user-maintainable menu and security systems are included, with security at both the program and option levels.

This package interfaces with the RSC Inventory, General Ledger, Purchase Order, Order Entry, and/or Job Costing modules.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Linda Wingfield
(919) 766–0571
RESOURCE SYSTEMS CORP.
4000 Clemmons Avenue, P.O. Box 1546
Clemmons, NC 27012

Accounts Receivable System

Operating System: VMS
Keywords: • Accounts receivable

This system provides data input through a CRT located in the client's office and verification of all input data before updating the billing master file. This system can be used by all industries and features verification of all input data before updating the receivables master file; an aged trial balance report that is sorted by customer and open invoices and that displays 30-, 60-, and 90-day delinquent accounts; an open-item status report that is sorted by customer and open invoices for a specified time and that includes more detail than aged trial balance; and A/R statements.

Price: $6000 – $12,000
Contact: George F. Cooper
(412) 355–2868
PITTSBURGH NATIONAL BANK
Financial Systems Group
Fifth Avenue and Wood Street
Pittsburgh, PA 15222

Accounts Receivables

Operating System: VMS
Keywords: • Accounts receivable

This program offers a complete accounts receivable system.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Andrew Yasenchak
(201) 231–9400
UNITRONIX DATA SYSTEMS, INC.
50 County Line Road
Somerville, NJ 08876

ACCPAY–IMPRS Accounts Payable A/P System

Operating System: VMS
Keywords: • Accounts payable • General ledger
• Query facilities

This total accounts payable system with complete interface to the general ledger includes data verification and information checks on entry, update routines with audit trail, automatic payment of monthly vouchers, register or invoices on the system, checks produced on a due-date basis as well as on a vendor-number basis, complete audit trails, handling of credit memos and vouchers, automatic entry of "repeat" data during entering routine, and automatic file backup before updates for recovery.

A version of this product is available for the PDP–11 computer.

Price: $3500

Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

ACCREC–IMPRS Accounts Receivable A/R System

Operating System: VMS

Keywords: • Accounts receivable • Financial analysis • Query facilities • Report writer

This total accounts receivable system with complete A/R management reporting uses an open-item concept. This system records all billable and nonbillable entries and up to four types of cash entries; allows for standard/optional $$ rates, optional service charge calculations by client, personalized client A/R statement messages, easy interactive reporting of all files, balance-forward and open-item account handling, and instant access to client records; provides complete on-line inquiring/processing; and performs extensive on-line editing and balancing.

A version of this product is available for the PDP–11 computer.

Price: $1500

Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

ACUITY Accounts Payable

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS

Keywords: • Accounts payable • Cost accounting • Financial management

This accrual system allows complete control over disbursements and provides expense analysis reports on demand. The Accounts Payable system interfaces directly with the Purchase Order and Receiving system and with the Project Management system, if desired. Cash requirement reports and flexibility in choosing which vendors, which

invoices, or partial payments are to be paid means complete control over your organization's cash flow. An optional check-reconciliation feature allows interactive bank reconciliation.

Additional features allow the system to use recurring standard AP, handle costs to project and task level, indicate whether an expense is billable to a project sponsor, handle cash and accrual accounting for tax purposes, use optional AP historical detail, use full batch control for each batch posted to GL, use separate accounting periods and external transaction dates, and summarize billable versus nonbillable other direct costs to a project.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500

Contact: Sherrell Harper
(619) 474–2010
COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ACUITY Accounts Receivable

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS

Keywords: • Accounts receivable • Financial analysis • Sales analysis

ACUITY Accounts Receivable handles both balance-forward and open-item customers. The user can define up to four aging periods for the AR aging report and statements to customers. Finance charges to past-due invoices can be added on request. Sales analysis is by customer type, by salesperson, by state, by project, and if used with the ACUITY Project Management system, by salesperson branch and by sales volume. The sales analysis includes cost-of-sales figures and gross profit. The system handles $1,000,000+ receipts and produces a sales tax report.

Sales commissions are also maintained by the system. Additional features include credit checking, optional AR history for sales journal, cash and accrual accounting, an audit trail for all cash and sales transactions, multiple sales tax per transaction, user-specifiable batch controls for each batch posted to the General Ledger, track amount of last payment, track date of last payment, and track unposted balance of new sales transactions.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500

Contact: Sherrell Harper
(619) 474–2010
COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ACUITY Fixed Assets

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS

Keywords: • Financial planning • Fixed assets • Forecasting • Taxes

The ACUITY Fixed Assets system handles the basic accounting functions for asset acquisition, asset retirement, and the periodic calculation of fixed-assets depreciation for all businesses. The new Accelerated Cost Recovery System (ACRS) for depreciation of fixed assets has been fully integrated and includes the new depreciation schedules, expensing regulations, and provisions for investment tax credit and recapture. In addition, all other standard depreciation methods are implemented for assets placed in service before 1981. The user can simultaneously record and track one set of depreciation figures for tax purposes and another for financial statement purposes.

Additional features allow the user to interactively enter asset acquisitions, changes, and retirements; print corresponding registers; use nine depreciation methods, including the unit-of-production method; maintain a complete audit trail with change history report; track investment tax credit; and print a projected depreciation summary showing depreciation of any asset by all possible methods for any life.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500
Contact: Sherrell Harper
(619) 474–2010
COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ACUITY Payroll

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS
Keywords: • General ledger • Payroll • Personnel • Taxes

This flexible and sophisticated system handles both salaried and hourly payrolls, as well as regular, overtime, special hours, holiday, vacation, sick, and comp time. Features include flexible vacation and sick time earned and taken, with user-defined GL distributions; multiple state tax tables; and up to nine deductions/earnings in addition to credit union, savings bond, garnish deduction, and union dues deductions. The system handles multiple pension plans, including the newly enacted 401K plan. The system produces payroll checks, quarterly reports, and W–2 forms and maintains payroll history, which shows earnings, taxes, and deductions of each check within a specified time range. Check reconciliation can be performed interactively, if desired.

Additional features include available GL distributions for inspection prior to posting, separate hour and dollar accounting for sick time and vacation earned, a separate accounting period and external transaction date, GL batch controls for all batches posted to GL, and year/in/out totals on payroll register.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500
Contact: Sherrell Harper
(619) 474–2010
COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

A/D (Fixed Assets and Depreciation), MCBA, Inc.

Operating System: VMS

Keywords: • Cost accounting • Financial planning

This package handles asset acquisition, asset retirement, and the periodic calculation of depreciation. The new Accelerated Cost Recovery System (ACRS) for depreciation of fixed assets has been fully integrated into the package and includes the new depreciation schedules, the new expensing regulations, and the new provisions for investment tax credit and recapture. In addition to handling the new ACRS depreciation methods, all other standard depreciation methods are implemented for assets put in service before 1981.

The user can simultaneously record and track two sets of depreciation figures: one for tax purposes and one for financial statement purposes. The user can obtain, on request, numerous reports that provide a breakdown of assets from many points of view, with lesser or greater detail.

The package can also print an amortization schedule for any loan, given the principal amount, interest rate, and term in years. The equal monthly or yearly payment is automatically calculated, and cumulative figures for interest paid and principal paid are shown, period by period, as well as the remaining principal in each period.

The program also provides maximum tax benefits from depreciating assets; allows maintenance to the asset and general ledger code files; handles up to 13 accounting periods a year; allows entry and editing of asset acquisitions, changes, and retirements; permits nine methods of depreciation and handles bonus depreciation and expensed amounts; tracks and maintains investment tax credit and provides for automatic recapture on retirement; projects depreciation amounts and the life of any asset, for all depreciation methods; may be automatically interfaced to MCBA's general ledger package; and separates assets from a previously grouped asset.

The package can also print the asset file printout; asset acquisition, fixed asset, and asset retirements registers; first-year expensed amounts, general ledger depreciation, investment tax credit, depreciation method change, asset change history, and A/D distribution to G/L reports; asset depreciation expense journal; projected depreciation summary; and amortization schedules.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000

Contact: Sales Representative
(818) 957–2900
MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

ADM (Accounting Data Management)

Operating System: VMS
Keywords: • Data base management • Decision support • General ledger • Report writer

This interactive business package, written in BASIC, provides operational managers with comprehensive accounting information. The package includes general ledger accounting, responsibility reporting, multiple-organization consolidation, accounts receivable tracking, and data management. ADM assists the manager by providing complete operating statements within minutes of the last relevant journal entry. The inquiry and reporting capabilities allow immediate access to accounting information necessary for decision making. ADM has few preconceptions about an organization's accounting procedures and formats. Through interactive dialog, the user supplies ADM with the firm's formats for its chart of accounts, journals, ledgers, reports, and so on. Each transaction is managed independently, not just as an addition or subtraction to an account balance. Each journal, ledger, and balance file is a data base available for query and reporting. The system contains a comprehensive report writer so that each user can easily tailor the content and format of reports by answering a few questions. Standard financial statements can be printed in detail or in summary. ADM also permits 1-time or ad hoc reports to be produced instantly. ADM can automatically interface with other COUNT/IFS modules.

Price: $9000
Contact: Jenny McCoy
(703) 790–1700
L&L SOFTWARE, INC.
8200 Greensboro Drive, Suite 200
McLean, VA 22102

Administrator 4/11

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Payroll

Administrator 4/11 is an integrated accounting and stock control system, suitable for any business. The system, also available in modular form, includes accounts receivable, accounts payable, general ledger, payroll, order processing, and stock control packages.

A version of this product is available for the PDP–11 computer.

Price: $800 – $14,000
Contact: H. B. H. Reporter, Managing Director
021–355 3511 or Telex: 335797 FOURTH G
FOURTH DIMENSION PRODUCTS LTD.
Fourth Dimension Building, 10 King Edward Square
Sutton Coldfield, West Midlands B73 6AP
United Kingdom

AIS Accounts Payable/Check Reconciliation System

Operating System: VMS
Keywords: • Accounts payable • Billing • Taxes

This program handles on-line invoice entry, payment authorization, and check printing; 8 due dates and 999 distributors for each invoice; automatic discount optimization and payment scheduling; multiple banks; full check reconciliation; handwritten checks; prepayment prooflist; vendor history; 4-way match and price validation with purchase order; and tax and 1099 reporting.

A job costing module is optional.

Price: Available upon request
Contact: Marketing Department
(415) 444–5954
ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94610

AIS Accounts Receivable/Sales Analysis System

Operating System: VMS
Keywords: • Accounts receivable • Credit • Report writer • Sales analysis

This program provides on-line cash entry and posting, lockbox entry of cash, a high-speed cash entry option, automatic cash-posting algorithms, projected cash requirements, disputed items, automated collection follow-up, credit analysis, automatic service/late-charge calculation, statements, write-offs, bad debts, collection agencies, aged trial balance with seven aging categories, cash and invoice balancing, selective dunning, and 999 distributions for each invoice.

Price: Available upon request
Contact: Marketing Department
(415) 444–5954
ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94610

AIS General Ledger/Budgeting System

Operating System: VMS
Keywords: • Cost accounting • General ledger • Report writer

This program provides for 99 years of history, 999 budgets for a year, one billion accounts, multicompany hierarchy, 14 periods, and prior-, current-, and future-period journal entries. The system also handles on-line entry and posting, automatic earnings calculation and posting, recurring journal entries, foreign currency, accruals and automatic reversals, allocations, consolidations, and flexible budgeting. The software includes financial and audit report writers.

A job costing module is optional.

Price: Available upon request

Contact: Marketing Department
(415) 444–5954
ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94610

AP–11 (Accounts Payable and Cash Disbursements Package)

Operating System: MicroVMS, VMS

Keywords: • Accounts payable • Billing • Financial analysis

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system features a highly flexible method of posting accounts payable charges and making cash disbursements to vendors. All posting is done with an interactive screen form to make posting faster and easier. Other user-oriented features include:

- User-defined vendor codes with up to 15 characters and a miscellaneous vendor class for 1-time payments
- A user-designed check form that accommodates almost any check design
- The choice of processing invoice payments individually or automatically for a group of vendors
- Recurring charges stored for group posting each period
- Multiple accounts payable control accounts that may be used in the same posting session
- A posting process that allows the user to hold invoices, make partial and unapplied payments (prepayments or CODs), and make allowances for manual payments
- User-defined terms and discounts that can be modified during payment of invoices
- 1099s printed for specified vendors
- For all entries, an audit trail provided by transaction journals
- Check reconciliation for outstanding checks and error corrections
- General ledger account distributions posted individually or summarized by account
- A password security system
- Interfaces to CN–11 Job Cost and GL–11 General Ledger; other complementary products include the PY–11 Payroll, AR–11 Accounts Receivable, FA–11 Fixed Assets, OE–11 Order Entry, and IC–11 Inventory Control systems

AP–11's reports include analyses of cash requirement, aged invoices, unapplied payments, invoice detail by vendor, a recurring invoice listing, a vendor and vendor class listing, and a check register and check reconciliation report.

The AP–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $925 – $7500
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

A/P (Accounts Payable)

Operating System: VMS
Keywords: • Accounts payable • Financial analysis • Report writer

This easy-to-learn interactive voucher processing and check-writing system allows fast on-line entry of accounts payable, immediate assessment of outstanding payables, and payment of vouchers on authorization. The system permits you to analyze expenditures by account, vendor, department, cost center, project, and so on, allowing tighter control of cash disbursements. Reports, including cash requirements, check and voucher registers, and summaries, are provided. A/P provides reports for analyzing accounting distributions and enables the accountant to correct them after the voucher has been paid. A/P allows you to write just one check, eliminating manually written checks. A/P can automatically interface with the Accounting Data Management System, Spread Financial Modeling Language, Payroll with Labor Distribution, and Job Cost System.

Price: $8000
Contact: Jenny McCoy
(703) 790–1700
L&L SOFTWARE, INC.
8200 Greensboro Drive, Suite 200
McLean, VA 22102

A/P (Accounts Payable), MCBA, Inc.

Operating System: VMS
Keywords: • Accounts payable • Report writer

This accrual accounts payable package allows maintenance of the vendor file; entry and editing of new payables, adjustments, credits, and prepaids; flexible payment preparation, including partial payments; check reconciliation; automatic interface to MCBA's general ledger, job

costing, standard product costing, and purchase order/receiving packages; full printer spooling; support for seven terminal types and multiple companies; and a security system.

This package also prints the vendor file printout, alphabetical vendor list, accounts payable voucher register, accounts payable aging report, vendor analysis inquiry, vendor account inquiry, cash requirements report, pre-check-writing report, accounts payable check register (and accounts payable checks), accounts payable/general ledger distribution report and cross-reference by vendor, check reconciliation report, and federal 1099 forms.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Sales Representative
(818) 957–2900
MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

A/P PLUS (Accounts Payable System)

Operating System: VMS
Keywords: • Accounts payable • Bill of materials • Report writer

This system, written in COBOL, provides comprehensive cash management and reconciliation with multicorporate and multibank capabilities and on-line inquiry of the system control, vendor master, and accounts payable master files. On-line invoice-processing facilities include editing of invoice data, calculation of due dates and discounts, and duplicate invoice and voucher screening. Check-writing facilities automatically produce checks on the due date or on demand, process multiple banks or corporations in a single run, place specific vendors or invoices on hold, and produce separate checks requiring special handling. Standard reporting capabilities include cash requirement projections by vendor, due date, and bank account; 1099 and state use taxes; travel and expense reporting; and vendor evaluation. The user-formatted report writer provides customized reports. The general ledger interface posts automatic entries to accounts payable, cash, discount, freight, sales tax, and other accounts. Other on-line features include audit trails, menu-driven job execution, and system security. Source code is available.

Price: Available upon request
Contact: Marc Desrosiers
(617) 655–8200
MCCORMACK & DODGE
1225 Worcester Road
Natick, MA 01760

APPGEN Accountants Client Write-Up

Operating System: UNIX* (Berkeley)
Keywords: • Data collection • Payroll • Purchasing • Report writer

This program provides report writing features and flexible data entry for accountants. Data input accuracy is maintained because the system allows transaction entries to be edited and corrected before posting. Plus, transaction entry screens match the formats of the original documents. Entry screens exist for each type of original document — cash disbursements, sales, purchases, payroll deposits, and journals. Payroll and cash disbursement check entry may be mixed. However, statements produced through the statement generator are not tied to the chart of accounts format.

The system allows flexible account number formats, on-line CRT account inquiry for any account, a unique fiscal year for each client, and recurring journal entry. The system automatically generates a budget based on the prior years' budgets. Plus, the system includes audit trails — posting programs that automatically produce journals.

Reports include trial balance, general ledger, and worksheet reports. Payroll reports include summary, history, 941s, quarterly, and W–2s.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APPGEN Accounts Payable

Operating System: UNIX* (Berkeley)
Keywords: • Accounts payable • Printing • Report writer

This system provides comprehensive transaction abilities for vendor invoices, debit and credit memos, adjustments, and manual checks. Transaction entries may be edited and corrected before posting for data-input accuracy. Plus, transaction entry screens match the formats of the original documents.

The system allows manually written checks to be entered, edited, and posted and includes built-in check-reconciliation abilities. Plus, checks may be printed by A/P account or cash account number.

Vendor-oriented features include alphabetic or numeric vendor listings. A screen display allows inquiry into open items by vendor. Plus, a cash-requirements report may be printed by vendor or A/P account number. An aging report may be printed that includes all or selected

vendors or that lists vendors by account number. The system also includes a payables voucher selection for payment, vendor file maintenance facilities, and vendor analysis reports.

The system includes audit trails — posting programs that automatically produce journals. This system integrates with the Job Cost and General Ledger systems.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $600
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APPGEN Accounts Receivable

Operating System: UNIX* (Berkeley)
Keywords: • Accounts receivable • Billing • Credit • Report writer

This system handles the accounts receivable functions for sales. Data input accuracy is maintained by allowing transaction entry screens to be edited and corrected before posting. Plus, transaction entry screens match the formats of the original documents. Transaction entries include sales, cash receipts, credit memos, debit memos, adjustments, and finance charges. The system interfaces to the invoicing system for automatic input of sales entry information.

The system allows complete customer and salesperson file maintenance. Information may be added, deleted, or modified. Customers may be listed alphabetically or numerically. The user may perform on-line inquiries into customer accounts. The system accommodates open-item and balance-forward accounts simultaneously. Open credits may be held and applied in accounts as desired.

Reports include production of detail or summary aged trial balances with automatic or operator-specified cut-off dates. Customer ranges may also be specified. The system also performs statement runs on demand. Sales reports include monthly sales summary, monthly cash summary, and commissions due. Plus, the system automatically calculates and posts finance charges. Audit trails include posting programs that automatically produce journals.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $600
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APPGEN Fixed Assets

Operating System: UNIX* (Berkeley)
Keywords: • Financial analysis • Fixed assets • Taxes

This program provides the following:

- Classification and categorization of assets in any order desired, with appropriate group totals
- Depreciation, including all ACRS methods; 125%, 150%, and 200% declining balance; sum of the year's digits; and straight line for any period desired
- Automatic shift from declining balance to straight line when advantageous, if requested
- Bonus depreciation calculations, with automatic limitations
- Investment credit report with automatic calculations of investment credit in the same format as Form 346B, including limitations on used Section 38 property
- Investment credit recapture report
- Automatic calculations of excess depreciation for recapture upon sale of asset
- Depreciation schedule, 8½″ × 11″ size for submittal with tax return

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2000
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APPGEN General Ledger

Operating System: UNIX* (Berkeley)
Keywords: • General ledger • Printing

General Ledger, also fed by Accounts Payable, Payroll, and Accounts Receivable as a comprehensive single-entry system, provides flexible account number formats; automatic budget generation, based on prior year's budget; on-line CRT account inquiry with detail; recurring journal entry; multicompany financial reporting; data-input accuracy, as transaction entries may be edited and corrected prior to posting; transaction entry screens that match the format of original documents; and audit trails — posting programs automatically produce journals.

The comprehensive statement generator allows customized financial statements, including statement of change in financial condition. Statements are not tied directly to the chart of accounts format. The trial balance, general ledger, and worksheet reports are standard.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $600
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APPGEN Job Cost

Operating System: UNIX* (Berkeley)
Keywords: • Cost accounting • Project management • Report writer

This program is fed from the Accounts Payable and Payroll systems. Job Cost provides flexible job identification and allows CRT job inquiry for on-line analysis of jobs. The system allows summary and detail cost tracking with unlimited cost categories in a job. User-defined subtotaling on reports, period and job-to-date cumulative hours and dollars, and cost versus budget data, with completion percentage and projections, are included.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APRA

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • Audit • General ledger

This integrated accounting system comprises sales ledger, purchase ledger, and nominal ledger for commercial organizations with an annual turnover in excess of £5 million. The system interfaces directly with the OPRA order processing and stock control system. APRA features comprehensive audit trail comprising daybooks and controls; open-item or balance-forward reporting; VAT schedules; debitors/creditors analyses; production of statements and remittance

advices with checks, cash commitment schedule, accruals, prepayments, and standing orders; budget comparisons; flexible trial balance presentation; and trading, profit and loss, and balance sheet sections.

A version of this product is available for the PDP–11 computer.

Price: £5500 – £9000
Contact: J. Goldsmith
0252 544321
SOFTWARE SCIENCES LTD.
Abbey House, 282/292 Farnborough Road
Farnborough, Hampshire GU14 7NB
England

APS (Accounts Payable System)

Operating System: VMS
Keywords: • Accounts payable • Data entry • Report writer

This comprehensive interactive system provides all current vendor, voucher, and check-payment information through direct on-line queries. Upon vouchering, invoices can be charged with multiple expense distributions. APS accommodates a 24-character alphanumeric distribution code and automatically consolidates and reports the distribution by code and vendor.

This flexible system generates cash-disbursement prelists of scheduled vendor payments to allow management to review and improve payment, hold payment, or extend payment dates. Checks are automatically generated and are designed for immediate mailing in window envelopes. Voucher stubs are attached as supporting detail to indicate which invoices are being paid. Payment runs can be made on a monthly, semimonthly, weekly, or as-needed basis. In addition, APS supports the use of manual (prepaid) checks with the subsequent terminal entry of all pertinent information. Screen-formatted entry programs foster user acceptance and transaction reliability. The system is fully integrated through an automatic interface to the White Hat General Ledger System, ensuring prompt and accurate accounting-period closes. A comprehensive set of reports includes Voucher Register, Vendor Master List, Cash Requirement Reports, Check Registers, Transaction Proof Listings, Check Reconciliation Report, Outstanding Check Journals, Paid Voucher Lists, Detailed Expense Distributions, and a 1099 Vendor Summary.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Linda M. Dobias
(617) 933–3780
WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

AR–11 (Accounts Receivable and Statement Generation)

Operating System: MicroVMS, VMS

Keywords: • Accounts receivable • Billing • Sales analysis • Taxes

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system features a highly flexible method of posting customer charges and payments and obtaining historical reports and aging analyses. All posting is done with an interactive screen form to make posting faster and easier. Other user-oriented features include:

- User-defined numeric or alphabetic customer codes and a user-designed customer statement that accommodates almost any statement design
- Multiple shipping addresses for each customer and billing to another customer
- The choice of posting on an open-item or a balance-forward basis
- Recurring customer charges stored for posting
- Unapplied credits allowed
- Reports for an unlimited date range and user-defined dates for aging analyses
- Commission calculations and reporting, including shared commissions, on sales or receipts and sales analyses available by company, salesperson, or product department
- Sales tax for multiple taxing entities
- For all entries, an audit trail provided by transaction journals
- A password security system
- Interfaces to OE–11 Order Entry and GL–11 General Ledger; other complementary products include the AP–11 Accounts Payable, PY–11 Payroll, FA–11 Fixed Assets, CN–11 Job Cost, and IC–11 Inventory Control systems

AR–11's reports include sales analyses and daily sales summaries, an aged accounts receivable, invoice payment analysis, customer and recurring accounts receivable listings, commission reports, customers over credit limit, and a tax liability report.

The AR–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $925 – $7500
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

A/R (Accounts Receivable), MCBA, Inc.

Operating System: VMS
Keywords: • Accounts receivable • Report writer

This open and/or balance-forward accounts receivable package allows maintenance of salesperson, customer master, A/R valid G/L account files; entry and editing of sales, credit and debit memos, and cash receipts; inquiry into customer accounts through the CRT; automatic or manual calculation of finance charges; interface to MCBA's general ledger and customer order processing packages; a security system; and support for multiple companies.

This package also prints the customer master file printout; alphabetical customer list; sales and receipts journals; accounts receivable aging, A/R-to-G/L distribution, and commissions-due reports; finance charges report; and sales analysis by customer, customer type, salesperson, territory, and sectional center.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Sales Representative
(818) 957–2900
MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

A/R, A/P (Accounts Receivable, Accounts Payable)

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable

Distribution medium: 9-track magnetic tape.

The Accounts Receivable system, which uses a detailed open-item-processing technique, maintains a complete breakdown of the invoices affected by any payment and a list of all payments applied to a given invoice. Other features include:

- Separate aged A/R listings of different revenue groups, such as sales and rental invoices. This feature is invaluable if groups are financed from different sources.
- On-line displays of a client's account, including all open-item transactions.
- An interactive routine for payments entry and allocation, thereby minimizing keystrokes and maximizing accuracy.
- Monthly statements for a set of clients (rather than for all clients).

- User-friendly validation reports; the system automatically includes the client's name and the G/L description.
- Automatic posting to the G/L.

The Accounts Payable system features multicurrency processing; support for manual checks and discounts; on-line display of vendor information, including open items; and aged A/P listings. The system also includes invoices that may be paid according to a regular cycle run or by specific invoice number. A simulation run precedes the actual check generation to allow careful analysis of the impact on cash flow.

A version of this product is available for the PDP–11 computer.

Price: $12,000
Contact: Robert Brown
(902) 429–3175
DYMAXION RESEARCH LTD.
Box 1053, Armdale Station
Halifax, Nova Scotia B3L 4L5
Canada

ARS (Accounts Receivable System)

Operating System: VMS
Keywords: • Accounts receivable • Order entry

This comprehensive interactive accounts receivable system for open-item and balance-forward methods of cash application provides all current customer, credit, and invoice information through on-line queries from multiple terminals. Transactions are journalized for control purposes, providing a complete and comprehensive audit trail. Additionally, the system tracks and reports by general ledger distribution and organization code accounts all accounting data entering the system. The ARS user can apply and account for postings of cash, debit memos, and unapplied cash. Credit memo invoices may be entered and applied at a later date. Finance charge invoices for selected customers may also be generated. The ARS system contains an extensive credit management subsystem. Credit limits and risk codes may be assigned to each customer. The system is fully integrated through a posting process with the White Hat Order Processing and General Ledger systems, ensuring prompt and accurate accounting period closes. A comprehensive set of reports includes Invoice Register, Posting Journals, Summary and Detailed Aged Trial Balances, Delinquent Register, Customer Master List, Sales Distribution Report, Input Proof Listing, Cash Application Journal, Cash Deposit Recap, and a Commission Register.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Linda M. Dobias
(617) 933–3780
WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

ATT (Automated Time and Attendance)

Operating System: VMS
Keywords: • Data collection • Payroll • Statistics

This system interfaces with an automated (electronic) time clock to track and record employee attendance, lateness, and absences. ATT is linked to a benefits accrual base so that absences or penalties for lateness are charged to the appropriate fringe benefit, such as vacation, sick, and so forth and/or payroll system. ATT significantly reduces the time necessary to calculate and process employee hours worked each payroll period. The system generates a daily shift report and a weekly attendance report and accrues lateness monthly and annually. ATT operates as part of HDS/11 or independently.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Robert Greenblatt
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

BAS (Budgetary Accounting System)

Operating System: VMS
Keywords: • Cost accounting • Financial analysis

This financial and administrative package is designed for colleges, universities, school boards, municipalities, and paragovernmental agencies. BAS features integrated encumbrance and actual general ledger; multiple user-defined chart-of-account structures that support element dictionaries; a financial report writer with user-defined format, account selection and sequence, totaling hierarchy, selection of financial data elements, journal entry detail, and arithmetic calculations and capability of combining current year and up to nine prior years of history; user-defined subledger control (capital, work orders, special projects, vehicle cost, and so forth); accounts payable and check processing/reconciliation; vendor control and information; and purchase order (commitment) control.

A version of this product is available for the PDP–11 computer.

Price: $30,000 (Canadian)
Contact: Dennis Sakamoto
(416) 433–2100
S.R.B. INTERNATIONAL LTD.
Whitby Corporate Centre
209 Dundas Street E., Suite 205
Whitby, Ontario L1N 7H8
Canada

Capital Project Management System

Operating System: VMS
Keywords: • Cost accounting • Project management
Memory required: 120KB.

This system tracks expenditures made during the construction phase of a project. After the project is completed, the system translates capital expenditures into capital assets. The system operates independently of other financial systems in either a real-time on-line (IBM or HP) or batch mode. Features include four structural levels with automatic default capability, multicompany processing, and automatic calculation of progress payment ITC. Capitalized interest is calculated automatically, based on FASB–34. This system interfaces to fixed asset and accounts payable systems. Budget amounts are entered by period or in total and are automatically spread across 12 or 13 periods. The system is written in ANSI COBOL.

Price: $27,000 – $44,100
Contact: Chuck Jolly
(408) 730–0100
DATA DESIGN ASSOCIATES
1279 Oakmead Parkway
Sunnyvale, CA 94086

CAS (Comprehensive Accounting System)

Operating System: VMS
Keywords: • Financial management • Inventory • Purchasing • Sales analysis

This system, written in DIBOL, is highly interactive and menu driven. The major modules include Accounts Payable, Accounts Receivable, Payroll, Inventory Management, Order Entry/Invoicing, Purchasing, and Sales Analysis, with all modules interfaced with General Ledger. The menu system incorporates password security, allowing only those users with authorization to access specific modules. In addition, menu presentations list only those modules accessible to the user.

Print management includes on-line/character printers, spooling, printers attached to terminals, and multiple-pitch selection for character printers. Terminal compatibility includes VT100 and VT200 series. Internal file management fully protects data files and provides an automatic restart recovery feature in the event of power failure or other interruption.

CAS supports multiple branch/division organizations by allowing multiple inventories, customer sets, vendor sets, and so forth. The integrated general ledger produces consolidated financial statements, as well as combined consolidated holding-company balance sheets and profit or loss statements from organizational entities.

The software installation procedure is highlighted by a menu-driven automatic process that queries the operator for tailored options, then installs the software without further intervention. All update activity produces a complete audit trail, including master file maintenance. Site-specific information, such as company name, sales tax locations and rates, state payroll tax tables, inventory pricing rules, and so forth, is stored in a common table master. Thus, users can tailor and update frequently, changing variables to meet specific business needs.

A version of this product is available for the PDP–11 computer.

Price: $5560 – $13,125
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.1 (General Ledger)

Operating System: VMS
Keywords: • General ledger • Report writer

This module may be interfaced with the other CAS modules and uses the standard double-entry accounting method. The module consists of interface management, manual journal entry, chart-of-account maintenance, budgeting, and prior-year history. Four standard report formats, consisting of general ledger, working trial balance, source cross-reference, and chart-of-account listings, are provided as well.

A user-maintained report writer allows a user to custom tailor balance sheets, profit or loss statements, budget analysis, prior-year comparisons, components of working capital, cash flow, changes in financial position, and other user-created reports. When fully interfaced with other CAS modules, daily financial statements are available. A multiple branch/division entity structure provides reports at the most detailed or most consolidated level.

The general ledger account number format can be up to 16 characters with embedded dashes for structured account numbering. Automatic chart-of-accounts generation allows a basic skeleton of accounts to be expanded to meet the needs of all subsidiary reporting entities. Year-end closing is an automatic process and does not require reentry of balances that are carried forward.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.2 (Accounts Payable)

Operating System: VMS
Keywords: • Accounts payable

This module, which may be interfaced with general ledger and uses accrual accounting, consists of vendor file maintenance, voucher entry, partial payment entry, pre–check writing, cash requirements, check writing, check register, general ledger account distribution, alphabetical vendor list, aging analysis, monthly disbursements, monthly check register, and vendor analysis. CAS.2 handles detailed or summary general ledger distributions, single vendor master common to all branches or multiple vendor masters unique to each branch, and automatic or manual voucher number control and optionally forces all discounts to be taken. Multiple cash accounts may be used for single or multiple branches, which allow multiple accounts payable accrual accounts. Discounts may be automatically calculated as a percentage or entered as a specific dollar amount.

Support for hand-written and prepaid or partial payments is provided so that all accounts payable information is consistently posted to the general ledger. Check writing provides for multiple invoices/vouchers to be paid with the same check. Full control of checks to be written is provided through the interactive pre–check writing, allowing individual selection of vendors and vouchers to be paid, and individual deferral of vendors and vouchers, as well as selection and deferral by cut-off date across all vendors and vouchers.

General ledger account distribution can be reviewed in detail and in summary prior to the interface to general ledger.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.3 (Accounts Receivable)

Operating System: VMS
Keywords: • Accounts receivable • Billing • Sales analysis

This module, which may be optionally interfaced with general ledger and order entry/invoicing, consists of cash receipts, manual sales entry, account inquiry, aging analysis, customer file maintenance, alphabetical customer list, label printing, monthly finance charging, monthly customer statements, monthly sales/cash summary, sales tax reporting, and salesperson reporting. CAS.3 allows tailorable interface with general ledger, single customer master common to all branches or multiple customer masters unique to each branch, daily or monthly aging, minimum finance charge with base, and future aging.

Individual customers may be established as balance-forward or open-item accounting methods, have separate bill-to records, individual finance charge rates, and allow or disallow monthly statements with or without past-due messages. Aging reports are available on demand, providing detailed or summary analysis, no activity, delinquent account, and credit balance account exception reports. Salespersons may be defined by name. Information is reported on each salesperson for sales/costs month to date and year to date. Terms can be tailored, including discount percentage, default terms day, default terms month, and whether aging should be based on invoice date or due date.

Sales tax location codes may be defined by description and preset with a percentage of tax; freight tax may be allowed or disallowed. Information is reported on taxable/nontaxable sales with sales/freight tax collected month to date and year to date.

Past-due messages may be defined for 30, 60, and 90+ days past due, with 100 characters available for each delinquent period. Credit history for each customer is maintained, including 12 prior months of payment history. Cash receipts may be automatically applied to multiple open items or posted as unapplied for later application.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.4 (Payroll)

Operating System: VMS
Keywords: • Employment • Payroll • Taxes

This module, which may be integrated with general ledger, consists of employee file maintenance, alphabetical employee list, time entry, precalculated and adjustment entry, income and withholding calculation, check writing, employee earnings reports, monthly and quarterly reports, and W–2s. CAS.4 allows tailorable interface with general ledger, with multiple distributions of gross pay and deductions, multiple- or single-branch support, exclusion of sick pay from FICA, employee numbering format, and labor distribution format.

Departments may be defined by collective or individual branches, with full detail and summary reporting for each payroll period. Fifteen employee deductions in addition to government deductions are provided, with the first five retaining totals on month to date, quarter to date, and year to date. Those deductions can be dollar amounts or percentages of gross pay or hours and may be withheld at different payroll intervals. Federal and state withholding tax tables, FICA withholding rate/limit, annual exemption amount, and federal and state unemployment rate/limit are user maintained and accessible through menu selection.

Simultaneous pay periods based on weekly, biweekly, semimonthly, and monthly are all supported. Hire date, termination date, last raise date, base pay for salary, city tax withholding, and additional federal, state, city withholding, vacation, and sick pay are all provided with this module.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.5 (Inventory Management)

Operating System: VMS
Keywords: • Inventory

This module consists of inventory item maintenance, item receiving entry, adjustments entry, price change, count physical inventory, stock inquiry, stock status, and stock valuation. CAS.5 allows tailorable interface with general ledger, purchasing, procurement planning, order entry/invoicing, buyer codes, commodity codes, selling price rule codes, unit of measure codes, and branch transfer markup. CAS.5 distinguishes among stock and nonstock items and sundry items. The user may suggest alternative items for out-of-stock items. Sales history by item can be accumulated as well. If purchasing is integrated,

receivings updates open purchase orders. If procurement planning is integrated, stock needs can be projected based on up to 18 months of prior history. If desired, CAS.5 can be a stand-alone module without order entry invoicing, using receivings and adjustments to reflect inventory fluctuations.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.6 (Order Entry/Invoicing)

Operating System: VMS
Keywords: • Order entry

This module may optionally be interfaced with General Ledger and requires the Inventory Management and Accounts Receivable modules. The module handles order entry, order status, picking lists, invoicing, and back-order reporting.

CAS.6 allows tailorable order number control; order-field defaults; codes for credit status, customer price, FOB, freight allowance, memo reason, price change reason, and shipped-via codes; and price rule tables.

Order Entry may be used to produce invoices at the user's option. If invoices are to be produced, a 2-step process, including picking lists, can be implemented; or, invoices can be produced, omitting the picking list function. In addition, a counter invoicing feature of Order Entry is available to create real-time invoices for a direct-sales environment. When orders are posted, general ledger, inventory management, accounts receivable, and sales analysis are automatically updated.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.7 (Purchase Order)

Operating System: VMS
Keywords: • Purchasing

This module, integrated with Inventory Management through receivings, consists of a purchasing advice report, purchase order entry, a purchase order status report, purchase order printing, and purchase order back-order reporting. CAS.7 includes a vendor purchase advice that scans the inventory, printing suggested order quantities, based on stock level, quantity on order, quantity in transit, quantity committed, and order point. Purchase orders are maintained by purchase order number; the information required includes buyer, vendor, terms, ship-by date, cancel-by date, and detailed specifics on items being ordered.

The Inventory Management Receivings module updates open purchase orders as stock is received.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS.8 (Sales Analysis)

Operating System: VMS
Keywords: • Sales analysis

This module provides customer analysis reports from the Accounts Receivable module and item analysis from Inventory Management. CAS.8 interactively queries for information to be included in the report by a range of information that may be in the file and allows the order sequence of the report to be selected and subtotaled within the selections.

A version of this product is available for the PDP–11 computer.

Price: $695 – $1640
Contact: Dan Sadler
(801) 268–1395
D & M SYSTEMS, INC.
986 Atherton Drive, Suite 201
Salt Lake City, UT 84123

CAS<>AD

Operating System: MicroVMS, VMS
Keywords: • Financial management • Financial planning • Project management • Taxes

This on-line, interactive, menu-driven package supports asset acquisition and retirement, ACRS, first-year expense, investment tax credit, and other standard depreciation methods. The system allows for the depreciation of each asset automatically or manually, for both book and tax reporting, and for nine methods of depreciation calculation.

Interactive entry and editing of investment tax credits allow deductions to be taken for 15 tax years. The user can print a projected depreciation summary for any asset, using any of the depreciation methods. Amortization schedules can also be generated for a given amount, for an interest rate, or for a term or payment amount.

Price: $2000 – $4000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 N.W. 63rd, Suite G103
Oklahoma City, OK 73116

CAS<>AP

Operating System: MicroVMS, VMS
Keywords: • Accounts payable

This on-line, interactive, menu-driven package manages cash requirements. A user can work from source documents, since the system automatically assigns a voucher number and calculates the due date, the discount date, and the amount through the terms in the vendor file. The system allows for automatic distribution by vendor or manual distribution by document. Multiple cash accounts are supported.

The cash-requirements report can be printed on request for a specific due date, for a projected payment date, or a selected vendor or all vendors. Off-line manual payments can be handled with full reporting. Flexible payment preparation through generalized selections, individual invoice selection, partials, or deferrals is performed prior to check writing. Form 1099s can be generated for selected vendors. Check reconciliation is also provided.

Price: $2000 – $4000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 N.W. 63rd, Suite G103
Oklahoma City, OK 73116

CAS<>AR

Operating System: MicroVMS, VMS
Keywords: • Accounts receivable

This on-line, interactive, menu-driven package manages cash flow. A user defines aging periods, ship-via, terms, and sales tax codes, as well as finance charge parameters. Statements are printed on request or at user-established frequencies, with optional aged totals printed at the bottom of the statement.

Sales analysis reports can be selected by customer, by customer type, or by salesperson. Sales commissions are controlled and reported. Detailed journals and registers are prepared for audit trail and tracing of invoices, payments, credit or debit memos, adjustments, and finance charges. Open invoices for a customer can be displayed to provide quick response to customer inquiries.

Price: $2000 – $4000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 N.W. 63rd, Suite G103
Oklahoma City, OK 73116

CAS<>GL

Operating System: MicroVMS, VMS
Keywords: • General ledger

This on-line, interactive, menu-driven package provides a versatile chart of accounts, consolidation of up to 99 companies, and flexible financial statement reporting with budgets and comparatives. Wild-card selection enables trial balances or financial statements to be produced for a structured subset/group of accounts and allows a user to modify the chart of accounts.

A 20-digit account number allows flexibility in structuring the chart, with a 6-digit major/sub; a 6-digit profit/cost center, division, or department; and an 8-digit project/miscellaneous number. The system can be operated with all numbers used or with a select group, depending on user needs. Optional counterbalancing accounts, automatic distribution, and automatic reversal next period can be specified on an account basis. Standard journal entries can also be maintained. Other application systems can be interfaced on demand.

Price: $2000 – $4000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 N.W. 63rd, Suite G103
Oklahoma City, OK 73116

CAS<>OE

Operating System: MicroVMS, VMS
Keywords: • Inventory • Order entry

This on-line, interactive, menu-driven package handles order processing, billing, back orders, and inventory receiving and control. Inventory costing can be done on either a weighted average or a last-cost basis, with sales pricing done on a multilevel basis. Repetitive billing,

noncontrolled inventory, serial number tracking, and contract pricing are special features that can be selected by a user. A single-level bill of materials with a dynamic build capability is provided.

An automatic inventory commitment is made when orders are entered and is relieved when invoices are printed. The pricing and commission structures are user definable. Back-order retention and control are maintained by item and customer reporting. Inventory activity and sales analysis reports are available on demand.

Price: $2000 – $4000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 N.W. 63rd, Suite G103
Oklahoma City, OK 73116

CAS<>PC

Operating System: MicroVMS, VMS
Keywords: • Cost accounting • Project management • Shop floor control

This on-line, interactive, menu-driven job costing package with detail reporting can be optionally broken down by phase and by task. Budget estimates are entered, and actual amounts are recorded for income, direct and indirect costs, and labor costs and hours, using current-period, year-to-date, and project-to-date time periods. An individual employee or a vendor/contractor can be assigned to each task within the project, with estimated and actual start and completion dates specified. Overhead can be calculated and added to the project by specifying an actual amount, an hourly cost, or a percentage of budget.

Repetitive maintenance is also supported, with schedule reporting for a supervisor, an employee, or a vendor/contractor. The project control report provides a summary report showing profitability and a history report giving a detailed income statement.

Price: $2000 – $4000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 N.W. 63rd, Suite G103
Oklahoma City, OK 73116

CAS<>PR

Operating System: MicroVMS, VMS
Keywords: • Payroll

This on-line, interactive, menu-driven payroll package provides user-maintained tax tables, fixed voluntary deductions, optional voluntary deductions/earnings with frequency code, as well as temporary deductions/earnings. Hourly or salaried employees can be processed together or separately, along with nonemployees who have no taxes calculated and do not affect 941 totals.

The user-maintained control file includes FICA and FUI percentages and maximums, with associated accounts for all earnings, deductions, and tax amounts to permit interfacing with general ledger. Tax reports include 941s and 1099s, as well as detailed employee information to facilitate unemployment and other state/city reporting.

Price: $2000 – $4000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 N.W. 63rd, Suite G103
Oklahoma City, OK 73116

CDIS Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Manufacturing • Wholesale
Memory required: 1MB.

CDIS Accounts Payable, written in COBOL II, features simultaneous update to CDIS General Ledger; full integration with CDIS Purchasing and with invoice line-item information created in Accounts Payable and General Ledger; direct entry of vouchers; full cash requirement/invoice hold/select capability; computer-generated checks from one or more banks, with void capability and handwritten check information processing; and standard reports. Other features include automatic validation, user-defined processing parameters, payment of regularly occurring invoices, on-screen and off-line inquiries, shared or unique company structures, 3-way purchase order matching, and multiple check printing sequences.

Price: $15,000
Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Billing • Manufacturing
Memory Required: 1MB.

CDIS Accounts Receivable, written in COBOL II, features simultaneous update to CDIS General Ledger, parameter-driven statement generation, on-line cash application capability, payment-void processing, and on-line customer summary and detail aging. Other features include on-line customer invoice inquiry in summary or detail form, a full complement of standard reports, user-defined processing parameters, variable customer payments, shared or unique company structures, multilevel security governing user access, and customers shared by multiple levels of dunning letters.

Price: $15,000

Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS Fixed Assets

Operating System: VMS

Keywords: • Financial analysis • Fixed assets • Manufacturing

This asset management system integrates with CDIS General Ledger to provide extensive profiles and to manage multiple companies and company consolidations, charts of accounts, and fiscal periods.

A variety of depreciation methods are provided. You can automatically switch to alternative methods when dynamic conditions dictate change.

Depreciation of new assets is accomplished with the Accelerated Cost Recovery System (ACRS) and the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA) guidelines. Pre-1981 asset depreciation can also be handled. Other features include Investment Tax Credit (ITC) calculation of gain/loss, insurance appraisal capabilities to determine current insurable values, multiple book capability to satisfy different taxing authorities and special reporting requirements, and 10-year projections for depreciation and capital replacement.

Price: $10,000

Contact: Roy E. Mann
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS General Ledger

Operating System: VMS

Keywords: • Cost accounting • General ledger • Manufacturing • Wholesale

Memory required: 1MB.

CDIS General Ledger, written in COBOL II, features automatically formatted financial statements; on-line data entry programs with add, change, delete, inquire, and print capabilities; the choice of on-line data update or batch processing mode; recurring journal update after verification; on-line budget loading; and on-line status inquiry of user-defined batches in all CDIS applications. Other features include standard general ledger reports accessible from a single report menu; statistical accounting; general ledger transactions keyed by book; budgets established on a cost center, account, project, or subproject level; audit trails; and shared or unique company structures. The package includes project and statistical accounting and multiple levels of data rollup for reporting and inquiry.

CDIS Bank Reconciliation is available as an option to reconcile your financial records with those provided by the bank.

Price: $15,000
Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS Project Cost

Operating System: VMS
Keywords: • Cost accounting • Financial management • Project management

This system defines specific jobs in a project and distributes hours and labor expenses to appropriate cost codes and projects. Customer and contract data, project start and completion dates, and combined projects are all maintained by the system.

A control report lists budgeted hours and expenses against actual hours and expenses. Reports can be sorted by project or employee.

General ledger accounts and cost centers are designated for the posting of labor cost–line data update or batch. The system posts to G/L books for reporting. Journal codes provide an audit trail.

Price: $5000
Contact: Roy E. Mann
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CFO Accounts Payable

Operating System: VMS
Keywords: • Accounts payable

This system, written in COBOL, operates as a stand alone or with other CFO packages. CFO Accounts Payable offers sophisticated on-line facilities for fast and easy data entry and retrieval. Among the system's many features are varied payment options, cash-requirements reporting, check reconciliation, partial payments, recurring payments, the ability to print any check stock, and report writing. Purchase includes a money-back guarantee.

Price: $14,000
Contact: Stephen A. McClelland
(214) 484–0106
DATA TECHNIQUES, INC.
11258 Goodnight, Suite 105
Dallas, TX 75229

CFO General Ledger

Operating System: VMS
Keywords: • General ledger

Memory required: 512KB. Distribution medium: magnetic tape.

This system, written in COBOL, offers a sophisticated on-line facility for fast and easy data entry and retrieval. Standard general ledger reports are provided, as well as the ability to create specialized reports through the CFO report writer. System features include multicompany data retention, multibudget on-line and batch facility, automatic reversals of identified accruals, extensive edit checking, automatic interface with other CFO packages, and a translator for integration of non-CFO subsystem data. The accompanying report writer supplies the power and flexibility of larger systems and features multilevel roll-ups. Purchase includes a money-back guarantee.

Price: $14,000
Contact: Stephen A. McClelland
(214) 484–0106
DATA TECHNIQUES, INC.
11258 Goodnight, Suite 105
Dallas, TX 75229

Chronicle™ Business Applications Software

Operating System: ULTRIX–32, UNITY, VMS
Keywords: • Accounts payable • Billing • Distribution • Financial management

This family of advanced business applications software uses sophisticated computer architecture and is particularly suited to the new 16- and 32-bit microprocessor systems. Chronicle runs on almost any machine using the UNIX* system and is portable to any of the major relational data bases. Chronicle extracts information on request in the form you choose.

The first phase of Chronicle, an accounting system, incorporates accounts payable, accounts receivable, and general ledger. The second phase serves the distribution industry and includes inventory, invoicing, purchase order processing, sales analysis, and sales order processing.

Chronicle's modular design can be customized to support national and local requirements. That design also allows Chronicle to interface with other modules and packages.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $2500/module
Contact: Sales Department
(416) 922–1937
HUMAN COMPUTING RESOURCES CORP.
10 St. Mary Street
Toronto, Ontario M4Y 1P9
Canada

CJ/ACCOUNTS PAYABLE™

Operating System: VMS
Keywords: • Accounts payable • Financial planning • Forecasting

This on-line menu-driven data base–oriented accounts payable system provides cash requirements forecasting and a disbursements function to achieve increased cash-flow management. The system fully accommodates multiple companies, divisions, and departments as well as single entities. System customization is achieved through user-defined master files, data tables, logic controls, and user-specified report parameters.

The system features efficient tracking of invoices, cash advances, expense statements, credit/debit memos, and automatic recurring payments and purchase orders; override pay dates; on-demand cash requirements forecasting; intercompany distribution; check reconciliation; and automatic data preparation for updating the general ledger.

Price: $14,000
Contact: Laura Vaughan
(813) 872–9990
COLLIER–JACKSON, INC.
3707 West Cherry Street
Tampa, FL 33607

CJ/ACCOUNTS RECEIVABLE™

Operating System: VMS
Keywords: • Accounts receivable • Billing • Financial planning • Forecasting

This on-line menu-driven data base–oriented invoicing and accounts receivable system provides control of customer account status for sales and collection analysis. The system fully accommodates multiple companies, divisions, and departments as well as single entities. System customization is achieved through user-defined master files, data tables, logic controls, and user-specified report parameters.

The system features open-item or balance-forward processing selection for each account; automatic invoices, statements, and age analysis; efficient cash receipts processing; cash receipts forecasting for current and future periods; sales analysis by salesperson, customer, and/or accounting period; and automatic data preparation for updating the general ledger.

Price: $14,000
Contact: Laura Vaughan
(813) 872–9990
COLLIER–JACKSON, INC.
3707 West Cherry Street
Tampa, FL 33607

CJ/ADVANCED GENERAL LEDGER™

Operating System: VMS
Keywords: • Financial analysis • Financial planning • General ledger

This on-line menu-driven data base–oriented general ledger and reporting system provides complete analysis, control, and forecasting features plus more sophisticated capabilities for intracorporate transactions, true variable budgeting, and highly individualized financial reporting for P&L and balance sheet. The system fully accommodates multiple-entity corporate structures and offers system customization through user-defined master files, tables, and logic parameters.

The system features an 18-position account number, both dollar and statistical accounts, summarization accounts, 99 years of retained history, multiple budgeting views with "best" and "worst" comparison capabilities, subledgers, corporate reorganizations independent of account structure, allocations, automatic batch interface from subsidiary accounting systems, and automatic chart of accounts duplication for new divisions and/or companies.

Price: $18,000
Contact: Laura Vaughan
(813) 872–9990
COLLIER–JACKSON, INC.
3707 West Cherry Street
Tampa, FL 33607

Class Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Financial management
Distribution medium: magnetic tape.

This system, written in VAX BASIC, accommodates a multibank environment by supplying detailed G/L distributions. The two options in payment policy are period due or date due. An instruction is given to the system each period to pay vendors with items due and outstanding. Five reporting periods are allowed. The system will hold payment for any items in discrepancy, as well as release for payment once cleared. The system will also accept manual checks with detail distribution to the G/L. Foreign currencies are maintained in a currency master file to assist foreign vendors. Immediate file access is available for any vendor's master file information, including inactive vendors. The user is supplied with a full credit listing and a cash-requirements report by individual period. The application monitors and assists the user in complete control of any outgoing monies.

Price: $20,000 – $30,000
Contact: Patricia Boittiaux
(403) 236–6126
CANALTA
7100 44th Street, S.E.
Calgary, Alberta T2H 1X2
Canada

Class Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Financial management
Distribution medium: magnetic tape.

This system, written in VAX BASIC, allows both open-item and balance-forward accounts within the same file, providing highly flexible customer account setups. A user can access customer information through both customer names and customer numbers. Invoice details can be queried from invoice number alone. Multiple terms within one invoice, such as varying due dates, periods, and discount percentages, provide a wide versatility in invoice posting.

The accounts receivable system automatically processes repetitive or contract billings such as rentals or leases. A bulk-payment feature applies single payments to multiple invoices to simplify the posting of cash transactions. Customer-defined credit terms allow up to nine unique credit terms on the user-defined terms code table. Definable period end dates enable the user to control the number of periods and the number of days in each period for agings.

Price: $20,000 – $30,000
Contact: Patricia Boittiaux
(403) 236–6126
CANALTA
7100 44th Street, S.E.
Calgary, Alberta T2H 1X2
Canada

Class General Ledger

Operating System: VMS
Keywords: • Financial management • General ledger
Distribution medium: magnetic tape.

This package, written in VAX BASIC, provides a flexible, user-defined chart of accounts that can be expanded to an unlimited number of account layers and that can selectively extract account information. The three budget models include current, alternate, and working budget. Budget models can be developed in 99 ways by using projection and extrapolation methods. An information-oriented report generator provides almost unlimited ways to present account information. An exchange-code table is referenced to report financial information in foreign currency. The system reports dollars and units for measurement values.

Price: $20,000 – $35,000
Contact: Patricia Boittiaux
(403) 236–6126
CANALTA
7100 44th Street, S.E.
Calgary, Alberta T2H 1X2
Canada

Client Accounting

Operating System: VMS
Keywords: • Financial analysis • General ledger • Payroll • Taxes

The Client Accounting system is user oriented and CPA supported. The system provides multiclient processing of general ledger and financial statements for an unlimited variety of client businesses. The key element is the highly flexible report writer for designing financial statements. Also integral is the sophisticated handling of consolidations for multientity clients (departments, regions, divisions, and so on).

The system contains a 12-digit general ledger account number, recurring journal entries, reversing journal, prior-year comparison, year-to-date detail of general ledger transactions, post-facto payroll, and continual updates and enhancements.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $12,500

Contact: Marc Alexander, National Sales Manager
(503) 641–8100
ALPINE DATASYSTEMS, INC.
8043 SW Cirrus Drive
Beaverton, OR 97005

Cornerstone Accounting System

Operating System: VMS

Keywords: • Accounts payable • Accounts receivable • General ledger • Payroll

This integrated system, written in structured COBOL, contains operator-specific menus that control access to applications such as general ledger, accounts receivable, accounts payable, payroll, purchase order, order entry/inventory, asset depreciation, project control, joint interest, revenue distribution, and lease management. Operational characteristics of applications are user maintained by a control file. A data dictionary–based inquiry and reporting option is also available. Those multicompany applications come with documentation and source code. Copy libraries standardize code and allow for efficient and consistent modifications.

Price: $1000 – $6000

Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 NW 63rd Street, Suite G103
Oklahoma City, OK 73116

Cost Center Accounting

Operating System: VMS

Keywords: • Accounts payable • Accounts receivable

Distribution media: disk, magnetic tape.

This combination payables and receivables system handles unlimited transactions and vendors and provides a complete audit trail and on-line validation. The interactive system includes an automatic update to general ledger and line-item detail or consolidation of several cost centers' detail in general ledger. This multiuser on-line system is integrated with other Landmark products.

The payables system offers a vendor master file, purchase order and invoice posting with control totals for the run and separate totals for each purchase order/invoice, recurring entries posting, tax and vendor-discount calculations, user-defined payment selection, automated check writing and hand-written check processing, check registers and

general ledger update reports, check reconciliation, open-item report by vendor for specific or all cost centers, paid-item report in nine formats, and more.

The receivables system contains a customer master file, up to five billing cycles for each customer, automatic calculation of taxes and discounts, late fees, recurring charges, an open-item receivables report by customer for specific or all cost centers, a paid-item receivables report in nine formats, and more.

Price: Available upon request
Contact: Carol Ryan, Marketing Director
(201) 722–5100
LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

Cost Center Payables

Operating System: VMS
Keywords: • Accounts payable • Calculation aids
Distribution media: disk, magnetic tape.

This interactive payables system handles unlimited transactions and vendors and provides a complete audit trail and on-line validation. The system includes an automatic update to general ledger, line-item detail or consolidation of several cost centers' detail in general ledger, purchase order and invoice posting with control totals and purchase order/invoice totals, recurring entries posting, tax and vendor-discount calculations, user-defined payment selection, automated check writing and hand-written check processing, check registers and general ledger update reports, check reconciliation, an open-item report by vendor for specific or all cost centers, a paid-item report in nine formats, and more. This multiuser on-line system is integrated with other Landmark products.

Price: Available upon request
Contact: Carol Ryan, Marketing Director
(201) 722–5100
LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

CPA–11 (Client Accounting)

Operating System: VMS
Keywords: • Cost accounting • Financial analysis
• General ledger
Distribution media: RL01, RL02, RX01.

This flexible multiple-entity client accounting general ledger and financial reporting system is designed for accountants' client write-up, as well as for business and nonprofit associations requiring multiple financial reporting for subsidiaries, locations, cost centers, funds, and the like. Users can design their own reports. The system provides for virtually unlimited levels of consolidation: accounts receivable, accounts payable, and payroll and property management interface.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $5000
Contact: Frank J. O'Kane, President
(213) 441–3123
FRANKLEN COMPUTER SYSTEMS, INC.
715 Fremont Avenue
South Pasadena, CA 91030

CPA Payroll

Operating System: VMS
Keywords: • Payroll

Distribution media: magnetic tape, RL02.

This multiclient payroll system provides all the processing and reporting required for CPA check writing. The system features an easy-to-use data entry sequence. The sequence permits data entry from turnaround documents or may be input directly from telephone instructions. That eliminates the need to manually write data on a source document.

A version of this product is available for the PDP–11 computer.

Price: $3000
Contact: David L. Ley
(313) 855–6181
RADLEY BUSINESS COMPUTERS
7071 Orchard Lake Road, Suite 305
W. Bloomfield, MI 48033

Credit Receivable System©

Operating System: UNIX* (Berkeley, System III, System V)
Keywords: • Accounts receivable

This interactive on-line system facilitates the processing of merchandise sales contracts by tracking customer payments on their respective contracts. Customer layaway payment tracking is also available. Late notices, finance charges, contract print, interactive monthly payment computation, and promise-to-pay tracking are featured.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $10,000
Contact: Vern Pang
(714) 978–1212
INFORMATION MANAGEMENT ASSOCIATES, INC.
1437 W. Palmyra
Orange, CA 92668

CW–11 (Client Write-Up)

Operating System: MicroVMS, VMS
Keywords: • General ledger • Payroll • Report writer • Spreadsheets

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system is a combination of the GL–11 General Ledger and the GP–11 Accountant's Payroll systems. CW–11 allows the user to post general ledger entries and payroll checks in the same posting session. Other user-oriented features include:

- A financial statement generator that allows many types of user-designed financial statements to be produced for any date range
- Payroll information stored by employee for quarterly reports and W–2s
- Automatic recurring entries based on constant dollar amounts or percentages of account balances
- An audit trail for all entries provided by transaction journals
- A detail posting collapse feature that does not hinder the ability to make prior-period adjustments or to obtain prior-period financial statements
- A spreadsheet interface for detailed financial analysis
- An unlimited number of clients with different charts of accounts and financial statements allowed in the same system
- A password security system
- Interfaces to AP–11 Accounts Payable, AR–11 Accounts Receivable, and FA–11 Fixed Assets systems; other complementary products include the CN–11 Job Cost, OE–11 Order Entry, and IC–11 Inventory Control systems

CW–11's financial statements include multiple balance sheets and income statements and a statement of changes, ratio and asset analyses, disclaimer letters, and many other user-defined financial statements. Reports include a chart of accounts listing, general ledger detail, trial balances, recurring allocation and standard journal listings, and user-designed quarterly reports and W–2s.

The GL–11 and GP–11 user's guides include information for the office manager, the terminal operator, and the application supervisor. The reference manuals provide information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $2800 – $11,000
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

Cyborg On-Line Payroll Administration System

Operating System: VMS
Keywords: • Payroll

Written in ANSI COBOL, this integrated system uses a consolidated employee data base containing all the information users need to perform payroll functions and to maintain a human resources management system. The system can run in either batch or on-line mode. The reporting feature includes standard payroll registers and reports, as well as the human resource reports necessary to comply with government requirements. The system also includes a high-level report writer language that enables the user to report on any information in the payroll/human resource data base.

The Payroll System has an extensive list of standard features: 500 unique earnings and 500 unique deductions for each company, a tax service for all tax-body levels, labor distribution, direct deposits, automatic check reconciliation, unlimited history, and a general ledger interface.

The Cyborg On-Line Payroll Administration System may be integrated with the Cyborg Human Resource Management System. Both systems are supported by a full year of free telephone assistance and a predetermined number of free training days. Both Payroll and Human Resource Management are industry independent.

Price: Available upon request
Contact: John Kluska
(312) 454–1865
CYBORG SYSTEMS, INC.
2 N. Riverside Plaza, 21st Floor
Chicago, IL 60606

Datacode® Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Banking • Forecasting • Mailing lists

Memory required: 128K minimum; 256K optimum.

This system, written in COBOL or RM/COBOL, provides the capabilities for recording, processing, and controlling payables transactions. The menu-driven system operates in a simple, conversational mode, with on-line data entry, validation, updating, and reporting. Help screens are available. Because the system serves multiple divisions and companies, each company can make payments to a different bank.

For input and inquiry, an alpha search facility is provided. One-time vendors can be created at voucher entry. Scheduled payment dates and cash discount amounts are automatically calculated from vendor terms or can be manually overridden. Distribution of payment can be by percentage or amount. If the system is interfaced with the Datacode General Ledger, account validation is done, and posting to the G/L can be daily or monthly in summary or detail.

Accounts Payable handles multiple banks, accounts, and foreign currencies. The system checks duplicate invoices and holds vendor and invoice payments. The system also features precheck cash requirements by bank, cash-requirements projection, and check reconciliation. Other features include a repetitive payment facility, uninterrupted processing by fiscal period, and optional vendor history file/reports.

Price: $5000 – $10,000
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Billing • Credit • Forecasting

Memory required: 128K.

This open-item or balance-forward system, written in COBOL or RM/COBOL, offers an effective, automated means of recording, processing, and controlling receivable transactions. The menu-driven system operates in simple conversational mode, with on-line data entry validation, updating, and reporting. The system features help screens, multiple currencies, automatic net and gross due-date calculation, payment-deviation calculation and maintenance, a forecast cash-flow report, dynamic aging for statements and trial balances, statement-selection criteria, variable statement messages, a delinquency report, credit-exception reporting, and an optional transaction history file. The system also has flexible overdue-interest calculation, maintenance, and posting; accepts unidentified and nontrade payments;

makes payment on account or on a specific invoice; and is stand alone or integrated with Datacode Order Processing and General Ledger systems.

Price: $5000 – $10,000
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Canadian Payroll

Operating System: VMS
Keywords: • Employment • Payroll • Personnel

Memory required: 128K minimum, 256K optimum.

This menu-driven system, written in COBOL or RM/COBOL, operates in a simple conversational mode with on-line data entry, updating, and reporting. Help screens are included.

The system can serve multiple companies or multiple divisions in a company in all provinces. Canadian Payroll is suitable for hourly, staff, executive, or other types of payroll.

The system can be modified to increase the number of earnings and deductions. The system includes 99 user-defined earnings and deductions with 10 formulas. Each employee may have up to 15 earnings and 15 deductions with 60 weeks of U.I.C.

Checks may be processed with or without external input, randomly, sequentially, or without manual intervention. Checks may be direct deposit or pay checks. Check reversal is included. Checks may include registers, deposit advice, bank, and more.

The Payroll system also calculates Canadian and Quebec pension plans, vacation pay, and T4s with reports.

Price: $6500 – $13,500
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® General Ledger

Operating System: VMS
Keywords: • Financial analysis • General ledger

Memory required: 128K minimum; 256K optimum.

This system provides a data base of actual and budget data for timely financial reporting. Each fiscal year can have 12 or 13 accounting periods. Up to nine years of history can be maintained for the data.

Manual journal entries and budget data are entered, edited, and posted interactively. The system integrates with Datacode Sales Order Processing, Accounts Receivable, Accounts Payable, and Canadian Payroll systems. Journal entries are created automatically in those subsystems and are posted daily or monthly in batch mode. Detail and summary posting of entries is specified at the account level. A maximum journal entry amount can be checked with warning on input. Recurring entries can be set up for automatic posting as well as accrual/reversal.

The system, written in COBOL or RM/COBOL, is menu driven and operates in a simple conversational mode, with on-line data entry, validation, updating, and reporting. Help screens are included.

The system can serve multiple companies and divisions. Account numbers can consist of up to 24 alphanumeric characters. The system can handle recurrent journal entries. Statements and balances can be generated at any time. Year-end closing and carry-forward procedures are included.

Price: $5000 – $10,000
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

DDP APS (Accounts Payable System)

Operating System: VMS
Keywords: • Accounts payable • Billing • Financial analysis

APS, a comprehensive, menu-oriented, easy-to-operate, easy-to-learn package, operates on a single- or a multicompany basis. That allows APS to be used in a time-sharing environment, while maintaining the integrity of each company's file.

APS allows you to take a percentage or a dollar discount; offers automatic control of discounts-due dates, preediting of amounts to be paid automatically, and automatic preparation of checks and vouchers; allows open invoices to be aged by either invoice date or due date; allows you to write manual checks and enter the data to produce a check register and the expense distribution; and interfaces with the DDP Purchasing Control and General Ledger modules.

APS provides the following reports: check register, checks, edit listings, batch reports on input, distribution by vendor, aged trial balance, cash requirement, and distribution by G/L amount.

A version of this product is available for the PDP–11 computer.

Price: $795 – $3500
Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

DDP ICSF (Inventory Control System)

Operating System: VMS
Keywords: • Distribution • Inventory

This comprehensive menu-oriented, easy-to-operate, easy-to-learn system operates on a single- or a multicompany basis. That allows the Inventory Control System to be used in a time-sharing environment, while maintaining the integrity of each company's files. This system is of special interest to companies dealing in food, meat, poultry, fish, paper, tobacco, candy, and chemicals.

The system manages inquiry, product sales, on order, returns, counts, receipt, restocking, price book, and out of stock by customer; offers 26 selling prices for each item; and provides truck load control — case/pack and weight/size/average. ICSF provides the following reports: product movement, stock receipt analysis, daily inventory adjustment, daily stock receipts, daily undershipped, daily lost profit, low stock, vendor list, on-order list, inventory status, product list, customer price list, and price changes.

A version of this product is available for the PDP–11 computer.

Price: $795 – $3500
Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

DDP OEIF (Order Entry/Invoicing)

Operating System: VMS
Keywords: • Billing • Distribution • Order entry
• Sales analysis

This comprehensive order entry, invoicing, and sales analysis system operates with the Inventory Control System (ICSF) and the Accounts Receivable System (PAR). Menu orientation makes this system easy to learn and simple to use. OEIF operates on either a single- or a multicompany basis and therefore can be used in a time-sharing environment, while maintaining the integrity of each company's files. This system is of special interest to companies dealing in food, meat, poultry, fish, paper, and tobacco/candy.

OEIF features on-line credit checks and product availability check at entry time; 26 price schedules for each item; automatic invoicing, using automatic pricing, special pricing, and random weight; standard or 1-time messages; a leaker allowance that may be passed to retail accounts; drop charges based on minimum tonnage by customer; warehouse pick lists produced by warehouse slot number, by customer number, by truck, or by route; load sheets indicating the cubic and tonnage capacity of the truck and whether multiple trucks are needed; and sales analysis by territory, account, or chain.

A version of this product is available for the PDP–11 computer.

Price: $1595 – $6995

Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

DDP PAR (Accounts Receivable)

Operating System: VMS

Keywords: • Accounts receivable • Billing • Distribution • Wholesale

This comprehensive, menu-oriented, easy-to-operate, easy-to-learn package operates on either a single- or a multicompany basis. That allows PAR to be used in a time-sharing environment, while maintaining the integrity of each company's file.

This package applies cash receipts on either a balance-forward or an open-item basis; establishes customer buying trends, credit history, and payment records; offers optional dunning and/or promotional messages; prints a detailed customer ledger showing activity for the calendar year; and allows a company to operate on a 12-month basis or 13 4-week accounting periods.

PAR can forecast cash receipts based on a moving average collection period for each customer.

Reports on demand include master file list, A/R aging, unearned discount, potential credit problems, sales journal, statements, customer ledger, cash forecasts, cash receipt journal, credit memo journal, and credit status.

A version of this product is available for the PDP–11 computer.

Price: $795 – $3500

Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

DDP PAS (General Ledger)

Operating System: VMS
Keywords: • Cost accounting • Financial analysis • General ledger

This series of interactive programs for accountants and companies demanding complete financial control operates on either a single- or a multiclient basis. That allows PAS to be used in a time-sharing environment, while maintaining the integrity of each client's file. Menu orientation makes this system easy to learn and simple to use.

PAS flexibility allows the user to define 12 or 13 accounting periods and to use any numbering scheme that does not exceed six digits. PAS offers personalized report formats and titling, with reports printed on 8½″ × 11″ paper; prints detailed or consolidated reports; permits profit center accounting with automatic consolidations; and provides the capability to compare budgets and/or the previous month's or year's figures.

PAS provides nine supporting journals; eight subledgers; up to eight management reports for each profit center, in any of six formats; general ledgers; trial balance; and edit reports.

A version of this product is available for the PDP–11 computer.

Price: $795 – $3500
Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

DDP PAY (Payroll System)

Operating System: VMS
Keywords: • Payroll • Personnel

This comprehensive menu-driven payroll package operates on either a single- or a multiclient basis. PAY can be used in a time-sharing environment, while maintaining the integrity of each file. PAY interfaces to DDP's PAS, General Ledger, and Job Cost System. Both salaried and hourly employees may be processed on a weekly, biweekly, semimonthly, or monthly basis. Ten types of hours may be entered with 10 corresponding rates for each type of hours. The system accepts tips, meals, bonus, commission, and other pay dollars. The normal check-writing and federal/state tax-reporting functions are provided with year-to-date and quarter-to-date registers, payroll journals, earnings, and labor distribution reports. Job information can be obtained through DDP's Job Cost System That capability serves manufacturing, tool and die, job shop, and construction firms.

A version of this product is available for the PDP–11 computer.

Price: $795 – $5500
Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

DDP PCSF (Purchasing Control System)

Operating System: VMS
Keywords: • Distribution • Inventory • Purchasing • Warehousing

This comprehensive, menu-oriented, easy-to-operate, easy-to-learn system operates on either a single- or a multicompany basis and therefore can be used in a time-sharing environment, while maintaining the integrity of each company's files. This system is of special interest to companies dealing in food, meat, fish, poultry, paper, tobacco/candy, and chemicals.

The purchasing system tracks inventory and noninventory items on order from suppliers. As purchase orders are entered, the program automatically produces the purchase order and simultaneously updates the inventory quantity on order. Management can inquire into the open file to determine what items are on order, with whom, the quantity on order, and the delivery date.

PCSF provides the following reports: purchase order receiving; purchase requirements; open purchase order; product listing; vendor/product listing; vendor history — TDY purchase, amount, and cost; daily lost income; product movement analysis — 4-week period; purchasing recap; stock receipt analysis; and low-stock report.

A version of this product is available for the PDP–11 computer.

Price: $795 – $1500
Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

DMS–1700 Accounting System

Operating System: VMS
Keywords: • Financial planning • General ledger • Purchasing

This system features integrated systems of general ledger, budgeting, purchasing, and accounts payable. DMS–1700 is designed for central or remote locations. The chart of accounts is user defined. Data entry is through a VDT, with menu-selected and menu-driven help facilities.

Price: $70,000
Contact: Chris Freedland
(617) 863–5000
DISTRIBUTION MANAGEMENT SYSTEMS, INC.
81 Hartwell Avenue
Lexington, MA 02173

Due Date Monitoring

Operating System: VMS
Keywords: • Management • Office systems • Report writer • Scheduling

This system is designed to enable an accounting firm to track engagements. The system provides a wide variety of free-formatted reports showing which engagements are coming due for any given client or responsible employee.

Highlights of this system are reports by office, client, or engagement of employee designation; user-definable sort codes; starting-date specification; estimated completion time; responsible-party designation; and automatic or user-defined report-formatting capability.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

EASY (Energy Accounting Systems)

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Payroll

EASY is an on-line interactive system controlled by a comprehensive menu system; the personalized menus allow access to defined options. These multicompany systems come with full documentation and source code and support centralized or distributed processing. A user-maintainable configuration file controls the characteristics of system operation. System applications include general ledger/financial, accounts receivable, accounts payable, payroll, joint interest, revenue distribution, lease management, authority for expenditure, run tickets, outside-operated lease, and economic evaluation. A data dictionary–based inquiry and reporting option is also available. EASY II provides the full functionality of the listed applications; EASY III is a subset for implementation on low-end VAXs.

Price: $6000 – $48,000
Contact: Merrill Likes
(405) 843–8631
UP–TIME SYSTEMS — SOFTWARE, INC.
1140 NW 63rd Street, Suite G103
Oklahoma City, OK 73116

FA–11 (Fixed Assets)

Operating System: MicroVMS, VMS
Keywords: • Financial analysis • Fixed assets • Taxes
Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system features detailed depreciation calculations for all assets for any depreciation period specified by the user. FA–11 depreciation methods include ACRS, ACRSL, ACRS for low-income housing; straight line, 200%, 150%, and 125% declining-balance methods; sum-of-the-years' digits; and units of production. Other features include:

- User-defined asset codes with up to 15 characters and 3 user-defined fields for additional asset information
- A book, tax, or other (for state use) depreciation ledger or up to all three ledgers for each asset
- Reports for an unlimited date range and user-defined property tax and insurance reports
- Bonus depreciation, added-value, and added-life calculations
- Investment tax credit, including the 50% of ITC reduction for depreciation, and investment tax credit recapture calculations
- Asset history kept for each asset, including maintenance expenses, location changes, and retirement information
- Projected depreciation for up to five methods, with depreciation method changes
- Optional automatic change to straight-line from declining-balance methods
- An audit trail for all entries provided by transaction journals and change logs
- On-line help text to provide additional information
- A password security system
- Interfaces to GL–11 General Ledger; other complementary products includes AP–11 Accounts Payable, AR–11 Accounts Receivable, PY–11 Payroll, CN–11 Job Cost, OE–11 Order Entry, and IC–11 Inventory Control systems

FA–11's reports include depreciation schedules, asset listings, a book/tax comparison, projected depreciation, asset history, retirement reports, investment credit and investment credit recapture reports, and property tax and insurance reports.

The FA–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $1200 – $6500
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

F/A PLUS (Fixed Assets Accounting System)

Operating System: VMS
Keywords: • Financial planning • Fixed assets • Property management

This system, written in COBOL, with property accounting and a tax-reporting capability, offers comprehensive control of acquisition, retirement, maintenance, and transfer of corporate assets. The system offers projection capabilities for short-term budgeting or long-term planning and can select a depreciation method and a tax regulation to optimize cash flow. F/A PLUS contains all federal and state tax information and complies with IRS regulations. System features include the Tax Equity and Fiscal Responsibility Act of 1982 (TEFRA), guideline class life system, facts and circumstances, and ACRS and ADR. F/A PLUS performs ITC calculations and gain/loss on asset retirements, including recapture under Sections 1245 and 1250. The system offers depreciation optimization and insurance valuation and analysis of company inventory. Lease accounting (FASB 13) and inflation accounting (FASB 33) are provided. The user can process book and tax segments independently. Source code is available.

Price: Available upon request
Contact: Marc Desrosiers
(617) 655–8200
MCCORMACK & DODGE
1225 Worcester Road
Natick, MA 01760

FACS — Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Forecasting • Report writer

This on-line fully interactive accounts payable system is functioning in such industries as construction, agriculture, newspapers, food distribution, and financial services. The package features direct interface to the FACS G/L and Job Costing; direct interface with the subcontractors reporting system and the purchase order system; daily invoice input and selective payment control; distribution of invoices to multiple jobs, departments, and cost description codes; date of discounts and daily monitoring of future discounts to be taken; cash requirements forecasting; and immediate supplier status lookup.

Reporting features include check and optional overflow remittance advice printing; an open-accounts payable report; reporting and payment of accounts payable by supplier, job, department, discount date, or any other desired option; monthly and annual accounts payable ledgers; and user-defined reports for history of purchases and payments to suppliers. All reports can be printed to the screen or to a hardcopy device.

A version of this product is available for the PDP–11 computer.

Price: $1500

Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

FACS — Accounts Receivable and Sales Analysis

Operating System: VMS

Keywords: • Accounts receivable • Audit • Report writer • Sales analysis

This package for both balance-forward and open-item accounts receivable customers operates stand alone or with the FACS General Ledger system.

Features of the FACS Accounts Receivable system include:

- Direct interface to FACS Inventory and Order Entry for complete A/R and sales analysis reporting
- Eight user-defined fields used in conjunction with sales analysis
- User-defined product codes and period sales analysis, such as month to month, this month this year compared to this month last year
- Automatic service charge calculation
- Screen display for customer inquiry
- Invoices, memos, adjustments, and payments that are entered into the system, using the same input screen
- Name and address files that include customer SIC code, Dun and Bradstreet number, banking relationship, and service charge option

Reporting features include user-defined reports for both the Product Master and Customer Master file as well as a user-defined report for all receivable transactions; customized invoices and statements, with custom messages printed for special statements; aged trial balance available for all customers, a range of customers, or by customer type; and user-defined sales analysis reports. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

FACS — Fixed Asset Management

Operating System: VMS
Keywords: • Fixed assets • Forecasting • Report writer • Spreadsheets

This accounting system features direct interface to FACS G/L; four depreciation schedules for each asset; ability to trace by serial number each asset's location by state and to track date in service, date acquired, date sold, and date retired; 10 depreciation methods, including user-defined calculations; automatic switch method computations; ability to track acquisition cost, salvage value, fair market value, appraised value, insurance value, and book value; ability to track first-year bonus or expense costs; full ITC calculations; and depreciation forecasting for single assets, groups of assets, or complete schedules.

Reporting features include a depreciation worksheet; user-defined fixed asset, depreciation, and general ledger reports; monthly and annual depreciation schedules; a spreadsheet expense report for all four depreciation schedules; a schedule for untracked assets; and an amortization schedule. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

FACS — General Ledger

Operating System: VMS
Keywords: • General ledger • Report writer

This package offers flexible financial reporting to a wide variety of end users. Through a system set-up routine, users choose those features that fit their requirements. The system features direct interface with FACS Payroll, FACS A/P, FACS Job Costing, and FACS Fixed Assets; subsidiary balances for each G/L account; a balance-to-date system that allows subsidiary balances to be carried across fiscal years; branch accounting with consolidation; automatic verification for G/L account, subaccount, job number, department number, and cost description number; out-of-balance protection; automatic journal entries; batch input controls; and integration to financial modeling for "smart budgeting" and other forecasting requirements.

Reporting features include a generalized report writer that allows users to define and store report types sorted, selected, subtotaled, and totaled on any data field in the G/L; a worksheet with optional trial balance; a G/L transaction distribution and user-definable transaction summary; a user-definable balance-to-date report, as well as subsidiary ledger, budget, and trial balance reports; transaction journals; posting proofs; and general ledger and financial statements. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP–11 computer.

Price: $1500
Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

FACS — Payroll

Operating System: VMS
Keywords: • Payroll • Report writer

This fully functional payroll reporting system is operating in a variety of diverse industries, including construction, labor-intensive agricultural environments, wholesale/retail distribution, and restaurants. The system features:

- Complete integration to the FACS G/L and FACS Job Costing
- Automatic entry of employer and employee accruals in G/L
- Paychecks for hourly, piecework, and salaried employees in the same payroll run
- Daily or periodic input of employees time cards
- Time card input distributed by multiple jobs, departments, and payroll cost descriptions

- Automatic earnings and deductions (FICA, federal, and state withholding, unemployment, workmen's compensation, industrial insurance, and so on)
- Multiple state income tax withholding capabilities
- User-defined earnings and additional deduction codes
- Union information
- Employee profile information

Reporting features include payroll entry proof reports, check calculation and printing, employer's tax deposit report and quarterly report for the employment security department, general ledger payroll distribution report, certified payrolls, union reports, and W–2 forms. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP–11 computer.

Price: $2000
Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

Fixed Asset Accounting System

Operating System: VMS
Keywords: • Accounts payable • Fixed assets • Project management

Memory required: 70KB minimum.

This system, written in ANSI COBOL, performs fixed-asset functions for multiple companies, manages corporate property, and provides construction-in-progress information. The system controls depreciation expenses; handles depreciation methods, including ACRS and TEFRA; and provides depreciation projections for any or all four books. Compilation and booking depreciation can be done at any frequency, from one month to one year.

Four independent books are featured for corporate, federal, and state tax reporting. The system also completes required tax forms and performs investment tax credit and energy credit calculations and recapture. Other features include single, partial, and mass asset transfers and five prorate conventions (actual months, month after, half-year, standard modified half-year, and alternate modified half-year). Maintenance data, leased-asset data, and insurance information are also covered, as are partial retirements and gain/loss calculations at retirement, including depreciation recapture for capital gains reporting.

The system includes user-defined input fields and user-controlled processing frequencies and year ends. Each company can have a set of report options, including text format and selection of books printed. Individual assets or groups of assets may be excluded from any reports. Multiple versions of individual reports may be generated.

Price: $37,400 – $76,600
Contact: Chuck Jolly
(408) 730–0100
DATA DESIGN ASSOCIATES
1279 Oakmead Parkway
Sunnyvale, CA 94086

Fixed Asset Depreciation

Operating System: VMS
Keywords: • Financial analysis • Financial planning • Fixed assets • Taxes

This system calculates depreciation for each asset rapidly and accurately. Depreciation is calculated for both book and tax values, so that assets may be recorded for maximum tax benefit (ACRS and TEFRA), as well as for the greatest impact on financial statements. The system incorporates both the new ACRS and TEFRA methods and the traditional depreciation methods. Totals can be stored for groups and classes, so that assets can be organized by branch, department, and so forth.

The system includes required government reports, such as depreciation schedule, schedule of investment tax credit, recapture of ITC, as well as the book tax comparison schedule. Separate fields are stored for purchase price and basis, if they are different.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Marc Alexander, National Sales Manager
(503) 641–8100
ALPINE DATASYSTEMS, INC.
8043 SW Cirrus Drive
Beaverton, OR 97005

Fixed Asset Depreciation

Operating System: VMS
Keywords: • Financial analysis • Fixed assets • Report writer • Taxes

This easy-to-use on-line system handles five depreciation methods: straight line, declining balance, double-declining balance, sum-of-years digits, and ACRS. The system includes 1983 tax law changes, calculates investment tax credits and investment tax credit recapture of relevant assets, creates monthly journal entries that stand alone or interface to General Ledger, maintains both book and tax depreciation, allows automatic conversion from accelerated depreciation methods to straight line, and handles full or partial disposals.

A report writer produces user-designed reports, as well as year-to-date fixed asset analysis, detailed reports by location, asset traffic report, insurance value report, annual depreciation report for income tax purposes, investment tax report, investment tax recapture report, and yearly disposal report.

The table-driven software allows multiple operators, entry validation, and 2-word password security.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Linda M. Wingfield, Software Product Manager
(919) 766–0571
RESOURCE SYSTEMS CORP.
P.O. Box 1546
Clemmons, NC 27012

Fixed Assets

Operating System: VMS
Keywords: • Financial analysis • Fixed assets • Taxes

The ADD Fixed Assets package is an integral part of the ADD Financial Management package. The package automatically computes depreciation, using any of the standard methods — straight line, double-declining balance, 150% declining, and the new ACRS formulas.

Assets are grouped and reports can be generated by division, company, location, ledger code, depreciation method, and more. In addition, the system can automatically generate journal entries on a monthly or a yearly basis in a mode suitable for direct automatic entry into the ADD General Ledger package.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $4000
Contact: Bruce A. Bott, President
(201) 584–4026
ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

Fixed Assets

Operating System: VMS
Keywords: • Data dictionary • Fixed assets

This system provides all the forms, programs, and procedures necessary to perform the fixed-assets function. Menu orientation makes this system easy to learn and simple to use. With the system's effective error reporting and interactive editing of input information, most errors can be identified and corrected before reaching the main system.

Reviewed annually by outside accountants, this system has a complete, easy-to-follow audit trail and is continually kept up to date. Comprehensive reporting includes depreciation comparisons and forecasts; registers for acquisitions, disposals, and transfers; ledger depreciation distribution reports; and numerous depreciation reports.

The program may be run stand alone or may be interfaced with a companion general ledger system. The documentation includes detailed operating procedures, flow diagrams, file layouts, report samples, program operating instructions, and a dictionary of data and terms used in the system. Complete support and training are available.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $7500

Contact: Sharen Robinson, Sales Assistant
(219) 935–5121
PLYCOM SERVICES, INC.
P.O. Box 160
Plymouth, IN 46563

FSG (Financial Statement Generator)

Operating System: VMS

Keywords: • Forms management • Report writer

FSG is designed to accommodate the complex, unusual reporting requirements of today's accountant. The FSG is an extension of the free-formatting capabilities that exist in the Client Accounting System.

True free-formatting capability allows the user to design an entire report on a line-by-line basis. Data elements and the positioning, printing, and numerical treatment of each element are user defined.

Some highlights of the Financial Statement Generator are line-by-line report definition; line math capabilities (add, subtract, multiply, divide); unlimited totaling levels; use of constants and percentages for calculations, projections, allocations, and so on; horizontal and vertical spacing; floating "$", "–", "( )", and so on; nonnumerical printing of units; multiaccount positioning for each line; multidivisor specifications; and multiclient use of established formats.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

General Ledger

Operating System: VMS
Keywords: • Financial analysis • General ledger

The ADD General Ledger system allows the user to define a chart of accounts and financial reports. The system is automatically updated by other applications packages from ADD, such as Accounts Payable, Payroll, Accounts Receivable, and Fixed Assets.

The "compare" function allows the user to contrast any factors desired — for example, "current month to budget," "this month to last year," or "year to date to last year to date." In addition to financial reports, the system produces worksheets, trial balance, journal of entries, and a detailed general ledger.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $6000
Contact: Bruce A. Bott, President
(201) 584–4026
ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

General Ledger

Operating System: VAX DSM, VMS
Keywords: • General ledger • Health care

This product is written in ANSI standard MUMPS and runs on a wide range of DIGITAL equipment, including micros, minis, and VAXs. This table-driven product provides multicompany general ledger capabilities and produces variable-format income statements, balance sheets, journals, accountant's worksheets, budget analysis statements, year-to-year comparisons, and so forth.

A version of this product is available for the PDP–11 computer.

Price: $2415 – $13,282
Contact: Richard R. Brink
(214) 422–1022
ANTRIM CORP.
101 E. Park Boulevard, Suite 855
Plano, TX 75074

General Ledger

Operating System: VMS
Keywords: • General ledger

This menu-driven system has add, change, delete, and list modes and includes a report writer feature and chart of accounts maintenance. Comparatives or selected statistics can be reported monthly, weekly, or daily. Other features include 7-digit account numbers, the last three of which are subaccount numbers used for departments, profit centers, or

different companies; recurring-entry registers; transactions compressions; automatic distributors; counterbalancing; and user-defined accounting periods. Running balances are kept and displayed for all entered transactions. General Ledger interacts with other Armadale business packages.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3000

Contact: Michael G. Sifton
(416) 477–8000
ARMADALE SYSTEMS INC.
Toronto Buttonville Airport
Markham, Ontario L3P 3J9
Canada

General Ledger

Operating System: VMS

Keywords: • General ledger

This module maintains a master journal, subsidiary journals, and the status of each general ledger account and prints generalized financial statements. You can specify the contents and format of each line item in the statements. General Ledger offers a trial balance at any time; automatic posting (updating of account balances) at the end of each accounting period; up to 14 separate period budgets, along with a constant period budget and year budget; and multicompany processing, with the ability to produce consolidated financial statements.

A version of this product is available for the PDP–11 computer.

Price: $3500

Contact: Janna McMillan
(617) 275–5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

General Ledger

Operating System: VMS

Keywords: • Financial management • General ledger • Report writer

Distribution media: magnetic tape, RK07, RL02.

This package is based on a number of interrelated master files, current and historical transaction files, and an ID center file, which is used to support the multicompany/subsidiary concept. Master files, comprising the chart of accounts, store current year, last year, budget, and modeling balances as well as user-defined flags and codes, which permit flexible financial reporting. Transaction files retain all posting information and are used in both reports and screen inquiries. The ID center file is used to define the structure of the account number, such as

company, division, or department, for a particular organization. The package features the handling of multiple companies, user-defined accounting periods, allowance of early entries and prior-period adjustments, supporting schedules, budgeting and modeling, financial reporting flexibility, allocation transactions, handling of recurring journal entries, comprehensive financial reporting, and the ability to interface with other accounting systems and store nonfinancial data.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $15,000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

General Ledger

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • General ledger

This complete double-entry system includes accounting journals, general ledger reports, financial statements, and posting routines that ensure that transactions are in balance before being posted. Month-end and year-end closing routines exist to ensure proper account balances. The user designates the start of the fiscal year. The general ledger system is written in C language and uses the public domain Ingres data base written by the University of California at Berkeley. Binary and source codes are available for UNIX* Berkeley 4.1 and 4.2. The source code is available for all others.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $4000
Contact: Fred Potthoff
(612) 941–9470
FARGO ELECTRONIC SERVICES, INC.
7150 Shady Oak Road
Eden Prairie, MN 55344

General Ledger

Operating System: VMS
Keywords: • General ledger

Memory required: 8–32K. Distribution media: disk, magnetic tape.

This interactive system handles up to 10 million general ledger entities and up to 1 billion chart-of-accounts descriptions and brings together concurrent cash and accrual accounting, complete with tax- and book-basis reporting. You no longer need to convert from one system to the other. The system provides unlimited history and future, as well as an automatic system-generated audit trail and dynamically

open books — transactions for past periods may be posted simultaneously with current transactions. Whenever corrections are made to past periods, all files are updated accordingly. Inter- and intracompany relationships are defined by the user. The system produces current and historical trial balances and transaction registers. You may post journal entries and straight-line budgets any time. Written in COBOL, the on-line, multiuser General Ledger system is integrated with other Landmark systems.

Price: Available upon request
Contact: Carol Ryan, Marketing Director
(201) 722–5100
LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

General Ledger

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • General ledger

This fully integrated on-line multiuser UNIX*-based general ledger system provides budget analysis and all standard G/L reports, including balance sheet, profit and loss statement, detail trial balance, summary trial balance, journals, schedules, budget comparisons, and cash flow statements. Manual entries allow for adjustments, budgets, and beginning balances. The system supports "memo" and "self-reversing" transactions. The user may define virtually any accounting period, and reports may be printed for any accounting period (current or past) at any time. Multicompany and multidivision support allows printing of either separate or consolidated statements. "Cash" and "accrual" accounting methods are supported simultaneously.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division. Timely information is assured through the automatic updating of G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

General Ledger

Operating System: VMS
Keywords: • Data dictionary • Financial analysis • General ledger

This system provides all the forms, programs, and procedures necessary to perform the general ledger and financial-reporting functions. Menu orientation makes this system easy to learn and simple to use. With the system's effective error reporting and interactive editing of input information, most errors can be identified and corrected before reaching the main system.

Reviewed annually by outside accountants, this system has a complete, easy-to-follow audit trail and is continually kept up to date. Comprehensive reporting includes trial balances, detail or summary activity listings, trial balances in 13-column worksheet format, transaction logs, historical and budget reports, and user-defined financial statements.

The program may be run stand alone or may be interfaced with companion payables, receivables, payroll, and fixed assets systems. The documentation includes detailed operating procedures, flow diagrams, file layouts, report samples, program operating instructions, and a dictionary of data and terms used in the system. Complete support and training are available.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $7500
Contact: Sharen Robinson, Sales Assistant
(219) 935–5121
PLYCOM SERVICES, INC.
P.O. Box 160
Plymouth, IN 46563

General Ledger

Operating System: VMS
Keywords: • Financial analysis • Financial management • Financial planning • General ledger

This menu-driven system allows multiple users, 18-digit account numbers, and entry validation. General Ledger interfaces with other accounting modules, combines module journals to provide combined journals, reverses prior month's accruals, allows recurring journal entries, can look at two months simultaneously, provides a detail audit trail, produces auditor worksheets with current-year data, selectively prints and summarizes account activity, and facilitates the budget process.

An included report writer prints balance sheets and comparative balance sheets; year-to-date, comparative, and budget-to-actual income statements; trend analyses; spreadsheets; current and year-to-date cash-flow statements; and user-defined statements.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000

Contact: Robert G. Jackson
(919) 766–0571
RESOURCE SYSTEMS CORP.
4000 Clemmons Avenue, P.O. Box 1546
Clemmons, NC 27012

General Ledger

Operating System: VMS

Keywords: • General ledger

This program offers a complete general ledger system.

A version of this product is available for the PDP–11 computer.

Price: $3500

Contact: Andrew Yasenchak
(201) 231–9400
UNITRONIX DATA SYSTEMS, INC.
50 County Line Road
Somerville, NJ 08876

General Ledger and Financial Reporting

Operating System: VMS

Keywords: • General ledger • Report writer

Distribution medium: magnetic tape.

The system is designed around six general procedure modules — Journal Processing, Financial Statements, General Ledger Reports, File Maintenance, File Listings, and System Control. The system can minimize errors by checking the accuracy of data entered into the system before records are updated. Those controls reduce the amount of manual checking and reviewing of finished reports. The format and content of financial statements, provided through the use of parameter-driven files, give you unlimited reporting flexibility. Financial statements and general ledger reports can be generated for any accounting period in the current year or prior years. Various financial statement and general ledger report run-time options allow you to customize your reporting requirements without custom programming. The system adjusts prior periods without affecting the comparability of the current period on the financial statements. A detailed general ledger reflects all transactions processed during a fiscal year. The system adds, changes, and deletes records and lists the contents of all master files. A special code in each account's master record determines whether transactions for the account are to be posted in detail or in one summary record.

Extensive use of help messages along with a menu-oriented system ensure easy installation and operation of the system. Source code is provided. The programs are written in VAX–11 COBOL using structured coding techniques for easy maintenance and modifications. The

system is designed and programmed specifically for the VAX/VMS architecture, resulting in an application that uses system resources efficiently. A free illustration manual is available upon request.

Price: $995
Contact: Bob Davis
(602) 957–4049
DMS, INC.
3714 East Indian School Road
Phoenix, AZ 85060

General Ledger Financial Control System

Operating System: VMS
Keywords: • Fixed assets • General ledger
• Project management

Memory required: 160KB minimum.

This system allows a user to maintain a detailed financial data base and to produce reports. The system provides access to general ledger information, on-line entry and inquiry on the same screen, multicompany capabilities (including control options), and user-defined account identification. Financial features allow you to consolidate dissimilar charts of accounts, post to current year without closing prior year, budget and forecast, perform full allocation, and perform foreign-currency translation.

The Automatic Interface Module (DD–AIM) provides an interface for other systems to the General Ledger System. A unique statement-analysis reporting capability (DD–STAR), similar to popular spreadsheet programs for microcomputers, is provided. The system is written in ANSI COBOL.

Price: $76,500 – $84,800
Contact: Chuck Jolly
(408) 730–0100
DATA DESIGN ASSOCIATES
1279 Oakmead Parkway
Sunnyvale, CA 94086

General Ledger System

Operating System: VMS
Keywords: • General ledger

This system provides general ledger, financial statements, and budgeting modules that can be customized to meet individual requirements and formats. The system maintains prior-year information, with beginning balance and separate monthly balances, and current beginning balances, with separate monthly balances. On financial statements, the balances allow the user to generate many comparative statements.

The General Ledger System can be used by any industry and features user-defined fiscal year; up to four levels of subtotals on a statement, with extensive formatting capability; transaction files that must be in balance before updating; unlimited updates for any period (monthly, quarterly, and so on); and a complete history of transactions for detailed printing.

The system can also distribute groups of accounts to other accounts on a weighted basis, that is, overhead to departments.

Price: $6000 – $12,000

Contact: George F. Cooper
(412) 355–4970
PITTSBURGH NATIONAL BANK
Financial Systems Group
Fifth Avenue and Wood Street
Pittsburgh, PA 15222

GL–11 (General Ledger and Financial Reporting)

Operating System: MicroVMS, VMS

Keywords: • Financial management • General ledger • Report writer • Spreadsheets

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system features detailed ledgers allowing open-item posting and financial statements designed by the user through parameter files. Other user-oriented features include:

- User-defined account numbers with up to 15 characters and up to 13 user-defined accounting periods for any fiscal year
- Multiple input screen for journal entries
- Automatic recurring entries based on constant dollar amounts or constant percentages of account balances
- A detail posting collapse feature that does not hinder the ability to make prior-period adjustments or to obtain prior-period financial statements
- An audit trail for all entries provided by transaction journals and a spreadsheet interface for detailed financial analysis
- Budget and prior-year information for financial reporting
- Wildcard reporting for multiple companies and multidivision capabilities
- A password security system
- Interfaces to the AP–11 Accounts Payable, AR–11 Accounts Receivable, PY–11 Payroll, and FA–11 Fixed Assets; other complementary products include the CN–11 Job Cost, OE–11 Order Entry, and IC–11 Inventory Control systems

GL–11's financial statements include multiple balance sheets and income statements, a statement of changes, ratio and asset analyses, disclaimer letters, and many detail, trial balances, recurring allocation and standard journal listings, and transaction journals.

The GL–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $925 – $7500
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

G/L (General Ledger)

Operating System: VMS
Keywords: • Financial analysis • Financial planning • General ledger

Distribution medium: 9-track magnetic tape.

In this system, transactions are entered interactively, but the data base is updated in batches. A tight validation and approval process provides maximum control. Other features provide various levels of profit centers, the capability to enter next year's budgets before this year's closing, interactive displays of current information on any account, and a financial statement generator permitting a wide range of reports in many formats.

The same accounts may appear in different reports, using various levels of summation.

A version of this product is available for the PDP–11 computer.

Price: $12,000
Contact: Robert Brown
(902) 429–3175
DYMAXION RESEARCH LTD.
Box 1053, Armdale Station
Halifax, Nova Scotia B3L 4L5
Canada

G/L (General Ledger), MCBA, Inc.

Operating System: VMS
Keywords: • General ledger • Report writer

This package handles up to eight companies, allows multiple profit centers, and includes up to 13 accounting periods in a company's fiscal year; provides sequential numbering of all G/L reports; can maintain a chart of accounts; permits entry and editing of general journal transactions; maintains transaction detail for the entire year so that year-end detail reports can be printed; includes a comprehensive year-ending

procedure and a security system; and interfaces with MCBA's Accounts Receivable, Accounts Payable, Payroll, Job Costing, and Fixed Assets and Depreciation packages. The package also prints the chart of accounts printout, general journal transaction register, detailed general ledger report, general ledger trial balance, general ledger source cross-reference, and financial statements that include flexible, user-defined formats.

A separate menu can optionally compress all transactions in the year-to-date file into one period-ending transaction for each period in each account as coded in the chart of accounts; create a sample set of year-to-date transactions to check the format of all financial statements; and display the amount of space remaining in all the major G/L files.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000

Contact: Sales Representative
(818) 957–2900
MCBA, INC.
2441 Honolulu Avenue
Montrose, CA 91020

G/L PLUS (General Ledger Information System)

Operating System: VMS

Keywords: • Financial analysis • Financial planning • General ledger • Report writer

This general ledger information and reporting system, written in COBOL, handles multiple corporation processing of financial, accounting, and statistical data. Journal entries can be entered and edited on line or in real time or can be constructed from the output of various subsystems (accounts payable, fixed assets, and so on). The translator module performs front-end prorations and allocation, provides offset transactions, and consolidates similar transactions. Repeating journal entries are warehoused, and journal entries can be recorded to provide on-line worksheets for recurring transactions. Retroactive journal entries updating prior periods of the current or previous year are carried forward through all subsequent balances to accommodate post-closing entries and restatement of selected reports. On-line real-time features include inquiry, control file update, on-line help documentation, report writer capabilities, a full budgeting module, advanced security features, and menu-driven job execution. Source code is available.

Price: Available upon request

Contact: Marc Desrosiers
(617) 655–8200
MCCORMACK & DODGE
1225 Worcester Road
Natick, MA 01760

GLS (General Ledger System)

Operating System: VMS
Keywords: • Financial management • General ledger • Report writer

This highly flexible interactive financial reporting system is designed for organizations requiring comprehensive financial control. The reports can be run daily, weekly, monthly, annually, or on any other user-defined time schedule. Reports can be detailed by company, division, department, or other desired responsibility center. GLS can accommodate a user-defined chart of accounts. The system audit trails are both extensive and complete. Unbalanced ledgers and journal entries are prevented by extensive edit checks throughout the system. GLS can also generate allocating, adjusting, and automatic reversing journal entries. Comparative reports can be produced, enabling the user to compare any past actual or budget accounting period with the current period in a clear, concise format. This module, available separately, is part of the White Hat Integrated Manufacturing Management Product.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Linda M. Dobias
(617) 933–3780
WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

IAS (Integrated Accounting System)

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Payroll

Distribution medium: magnetic tape.

This product features a full currency-exchange system, multilingual screens and reports, and powerful report generators. Full integration is available to other subsystems, such as order processing, inventory, and purchasing. IAS is ideal for large companies with multiple branches, regions, and responsibility centers. The system has been certified by Big–8 accounting firms and has proved itself in distributed and centralized applications.

Price: $15,000 – $75,000
Contact: Ed Katz
(602) 897–9576
SYSTEMS BY MICA, INC.
6101 S. Rural Road
Tempe, AZ 85283

IFAS (Interactive Financial Accounting System)

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Order entry

This comprehensive set of application modules for accounts receivable, accounts payable, financial reporting, and order entry/invoicing can be installed separately or combined with IMCS to form an integrated system. The IFAS functions provide a high degree of data base security through extensive on-line edit checking, numerous accounting controls, and the use of audit trails, transaction registers, and balancing techniques. Detailed descriptions of the many capabilities of these systems are available on request.

A version of this product is available for the PDP–11 computer.

Price: $4000 +
Contact: Kim Sheridan
(602) 323–1813
INTERACTIVE INFORMATION SYSTEMS, INC.
505 N. Alvernon Way
Tucson, AZ 85711

Integrated Business Software

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Inventory

Each business package — A/R, A/P, O/E, I/M, G/L, and PR — can function as a stand-alone module or as part of a complete integrated system, with activity in one system automatically updating all associated data in other systems. The order entry, invoicing, and inventory management modules make the system especially attractive to wholesalers, distributors, and small manufacturing firms.

Because of its well-structured, modular design, the system is extremely flexible and can function as a programming aid in designing other applications or in making customizations to the system itself.

The package is written in DBL.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $8000
Contact: Larry Triplett
(614) 826–7678
TRIAD DATA PROCESSING
36 E. Main Street
New Concord, OH 43762

InterAP™

Operating System: VAX DSM, VMS
Keywords: • Accounts payable • Financial analysis

This complete on-line interactive accounts payable system interfaces with the InterGL General Ledger and Financial Reporting System or may stand alone. The flexible accounts payable structure allows the user to define chart of accounts, vendor types and files, payment-frequency schedule, bank accounts, discount accounting method, and fiscal periods.

After the user enters payables by entering the number and amount, the system assigns a voucher control number to each payable. The user selects the vendor from the files and enters the invoice number, invoice date, amount, discount terms, due date, descriptive comment, and expense distribution. If the payable has been paid, the user is prompted for bank, check number, and check date. Voiding of previously issued checks is also accomplished through the payables entry function. Once entered, a series of payables may be posted to the vendor ledger if the control figures balance with what has been entered.

On-line inquiries may be performed to determine the status of a vendor's account, payables, or checks. Selection is by vendor, voucher number or range, invoice number, date, check number, and/or a combination of the above. Detailed or summary information is displayed on the screen or printed in hard-copy form. A check-reconciliation module allows the user to reconcile bank statements and to keep track of outstanding or uncleared checks.

The user can produce an accounts payable aging from a specified date (accrual or only up to a given fiscal period) and a general ledger aged trial balance, which highlights possible inconsistencies in dating of payables.

The payment process is accomplished by producing a cash-requirements report, which shows the amount due. The user then designates which items are to be paid and whether the discount is to be taken. A summary of what has been queued for payment is produced, and the user may add to or delete from that list. The user then requests the system to produce checks. If the user has indicated that the checks are correct, a check (run) register is printed, and the files are updated. Items may also be paid manually, by entering the check number.

Available reports and inquiries include monthly check registers, settlement reports, agings and ledgers for individual vendors or vendor types, and short voucher inquiries.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Alexander J. Phillips, President
(201) 256–7633
INTERACTIVE SYSTEMS AND MANAGEMENT CORP.
1500 Cardinal Drive
Little Falls, NJ 07424

InterGL™

Operating System: VAX DSM, VMS
Keywords: • Financial analysis • General ledger

This complete general ledger and financial reporting system can be used by any small to medium-size business or medical entity. InterGL serves up to 9000 major general accounts, keeps an entity's general and subsidiary ledgers, and produces financial and management reports.

The user may define and design a chart-of-account structure and financial reports, as well as the fiscal-period structure of the accounting system. The system can be used to produce divisional and consolidated reports. The system definition functions are accomplished on line, and extensive editing is performed to ensure correctness.

General ledger postings are entered on line. The user specifies the fiscal period and the number of postings. The account number is verified against the chart-of-account file, the name of the account is displayed, and the user then enters the date of the posting, its source, the amount of the posting, and any audit reference and explanation. The entry process minimizes the number of keystrokes while ensuring adherence to correct accounting principles.

The user may review and modify postings before posting them to the ledger. A posting to the ledger can be reversed by making an adjusting entry. Complete journal listings can be produced for all postings. Budget figures may also be entered into the system.

The system's reports include general ledger (with subsorting by vendor and customer within account), abbreviated general ledger, summary general ledger, journals, and working trial balance. Financial statements include P&L reports by division and/or consolidated for various periods and balance sheet. Statements can be produced with user-defined supporting and management schedules.

InterGL can take postings from other accounting systems, such as accounts payable, accounts receivable, and depreciation and amortization. Once a period has been closed, postings can no longer be made to that period. Closing of period creates the beginning balances for the next period. If a year-end closing is performed, only the balance sheet account figures are carried forward. The system may be used for both cash and accrual accounting.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Alexander J. Phillips, President
(201) 256–7633
INTERACTIVE SYSTEMS AND MANAGEMENT CORP.
1500 Cardinal Drive
Little Falls, NJ 07424

Inventory

Operating System: MicroVMS, VMS
Keywords: • Inventory

This package is programmed in VAX BASIC combined with file-driven procedures and handles multiple companies and branches and multiple divisions within branches. All system codes, reference numbers, and file specifications are user accessible and easily maintained. A security system is included, with security at the program level as well as at the option level.

The system features up to 20 characters for product identifications and up to 8 characters for bin location code; assigned general ledger account numbers for inventory, sales, and cost of sales for each product; interfacing with Order Entry and Purchase Order modules, making automatic journal entries for issues and receipts; unlimited files on previous-year history that can be transferred off line or purged; perpetual maintenance of warranty history records for serialized items sold to customers; a product tax-handling feature; reconciliation routines for comparing physical count; and FIFO, LIFO, or averaging inventory costing methods.

This package interfaces with RSC Accounts Receivable, Order Entry, General Ledger, and Purchase Order.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Linda Wingfield
(919) 766–0571
RESOURCE SYSTEMS CORP.
4000 Clemmons Avenue, P.O. Box 1546
Clemmons, NC 27012

Job Cost

Operating System: VMS
Keywords: • Cost accounting • Forecasting
• Project management

This part of the COUNT® Integrated Financial System serves the job cost or contract management environment. The Job Cost System pulls accounting and labor cost information from the other modules of COUNT/IFS. Thus, transactions are entered only once. The system

provides job cost and labor productivity reports. English-language commands, understandable error messages, and built-in help are included.

Price: $5000
Contact: Jenny McCoy
(703) 790–1700
L&L SOFTWARE, INC.
8200 Greensboro Drive, Suite 200
McLean, VA 22102

Job Cost Payables

Operating System: VMS
Keywords: • Accounts payable • Cost accounting
Distribution media: disk, magnetic tape.

This interactive system handles unlimited transactions, vendors and jobs, base and extras estimates, and unit pricing and provides a complete audit trail and on-line validation. The system includes an automatic update to general ledger, line-item detail or consolidation of several jobs' detail in general ledger, purchase order and invoice posting with control totals and purchase order/invoice totals, recurring-entries posting, tax and vendor-discount calculations, user-defined payment selection, automated check writing and handwritten check processing, check registers and general ledger update reports, check reconciliation, open-item report by vendor for specific or all cost centers, paid-item report in nine formats, and more. This multiuser on-line system is integrated with other Landmark products.

Price: Available upon request
Contact: Carol Ryan, Marketing Director
(201) 722–5100
LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

Job Costing

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Cost accounting • Manufacturing • Project management

This fully integrated on-line multiuser UNIX*-based system provides cost analysis by job and by phase, detail and summary reports, and current status inquiry. Estimate and actual information may be entered by operation. Manual entry, adjustments, job cost history, and revisions of estimates can be maintained by operation. Analysis reports that recap job cost by job, operation, product, customer, salesperson, or

employee are available. An estimate-versus-actual comparison can be printed by operation or employee. A cost-versus-actual comparison can be printed by product, customer, and salesperson.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division. Timely information is assured through the automatic updating of G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

K–Accounts — Integrated Accounting

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Sales analysis

The K–Accounts system, written in ANS COBOL, provides general, sales, and purchase ledgers on an integrated basis or separately. Facilities include standard update and a series of report generators. The data in the system is broken down into files, each of which is formatted to make the file directly addressable.

- General Ledger provides multilevel and flexible chart of account structures; responsibility reporting, budget preparation, generation, and flexing; allocation, currency handling, multicompany processing, and corporate consolidation; and flexible period dating, detailed audit trail, and extensive report facilities.
- Sales Ledger has extensive cash-matching facilities, comprehensive debtor control, cash-flow forecasting, service charge calculation, flexible reporting facilities, currency handling, sales budgets, statistical reporting, and sales analysis options.
- Purchase Ledger offers payment processing, using either payment or due date; dummy payments preview; payment control reports; payment terms; currency handling; one-off check production; bank reconciliation; and flexible reporting facilities.

On-line facilities include flexible formatted screens, menu-driven operation, resubmission and batch correction, inquiry facilities at account and transaction levels, and decision-making routines (cash matching and payment selection).

Price: £25,000 – £30,000
Contact: John Bowrage, Marketing Director
(01) 660–2444
KCS SOFTWARE PACKAGES
Horfield House, 814 Brighton Road
Purley, Surrey CR2 2BR
United Kingdom

Keane's Financial Accounting System

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger • Order entry

This fully integrated on-line accounting system provides on-line updates and access to the data through easy-to-use screens, complete security controls, and error validation. The system is also fully integrated with the Factory Information System.

Keane's Financial Accounting System consists of five modules: Sales Order Processing, Accounts Receivable, Accounts Payable, General Ledger/Report Writer, and Financial Modeling.

A version of this product is available for the PDP–11 computer.

Price: $30,000 – $50,000
Contact: Robert Clifford
(617) 863–0330
KEANE, INC.
420 Bedford Street
Lexington, MA 02173

MANMAN/AP

Operating System: VMS
Keywords: • Accounts payable

This interactive menu-driven product manages vendor and supplier payables and creates vouchers from purchase orders generated by MANMAN's manufacturing product or other sources. The 3-module product, comprised of Voucher Processing, Cash Disbursements, and Controls and Analysis, provides for multibank processing and project accounting. The product prints checks and reconciles account balances in the general ledger and allows for manual checks to be written and tracked. Expenses can be distributed to 50 general ledger accounts by account number and project. MANMAN/AP produces reports on vendor history, payments, and discounts. The product maintains a historical data base for vendors, month-end balances, and the accounts payable budget in the general ledger and updates the general ledger data base with month-end and year-end balances.

Price: $15,000
Contact: Carol Singh, Corporate Communications Coordinator
(415) 969–4442 ext. 4152
ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

MANMAN/FA

Operating System: VMS
Keywords: • Fixed assets

This interactive menu-driven product manages a company's depreciable and nondepreciable assets from acquisition through retirement. The 3-module product, comprised of Asset Tracking, Expense Reporting, and Depreciation Processing, handles acquisition, depreciation calculation, depreciation-schedule changes, incurred repair and maintenance expenses, and transfer and retirement. The user may enter separate book and tax-depreciation schedules for an asset. MANMAN/FA incorporates the Accelerated Cost Recovery System (ACRS) tax regulations for assets acquired or costs incurred in or after 1981. Pre-1981 tax depreciation is also available.

Price: $10,000
Contact: Carol Singh, Corporate Communications Coordinator
(415) 969–4442 ext. 4152
ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

MANMAN/GL

Operating System: VMS
Keywords: • General ledger

This interactive menu-driven product tracks financial transactions and presents the balances through a variety of financial statements. The 3-module product, comprised of Financial Statements, General Ledger Maintenance, and Journal Processing, completes the financial functions implemented with MANMAN's manufacturing, order management and accounts receivable, and accounts payable products. MANMAN/GL allows the user to budget or forecast balances by account number and to compare the figures with actuals earned or spent. Among the financial statements available are trial balance, daily and monthly transaction journals, monthly and quarterly comparative balance sheets, income statements, project by account summary, project summary, and department expense. A consolidation feature allows reporting across department or divisional boundaries for increased control over projects.

Price: $15,000
Contact: Carol Singh, Corporate Communications Coordinator
(415) 969–4442 ext. 4152
ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

MANMAN/PLANMAN™

Operating System: VMS
Keywords: • Financial analysis • Financial planning • General ledger • Spreadsheets

This interactive menu-driven product allows information from MANMAN's general ledger product to be transferred from the general ledger data base to a personal computer. The VisiCalc™ spreadsheet format is used to create or revise budget information. The final budget is loaded back into the general ledger. MANMAN/PLANMAN requires MANMAN's general ledger product and a Hewlett-Packard 120, 125, or 150 microcomputer. The product extracts account information by sequence of accounts, department or division, or natural account and can manipulate single or blocks of accounts.

VisiCalc™ is a trademark of VisiCorp.

Price: $2500
Contact: Carol Singh, Corporate Communications Coordinator
(415) 969–4442 ext. 4152
ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

MAPS/AP

Operating System: VMS
Keywords: • Accounts payable

The fully interactive MAPS/AP accounts payable system performs all data edits at screen entry time and offers extensive on-line inquiry for an up-to-the-minute picture of important information, such as vendor status, cash position, and departmental expenses. MAPS/AP interfaces with MAPS/GL and uses the same chart of accounts and organization. MAPS/AP mirrors the extensive security and control features of that CPA–designed package.

Price: $21,500 – $30,000
Contact: Shelley Swackhamer
(415) 856–1100
ROSS SYSTEMS, INC.
1860 Embarcadero Road
Palo Alto, CA 94303

MAPS/GL

Operating System: VMS
Keywords: • Financial planning • General ledger

This flexible, interactive, and user-controlled financial management/general ledger software package has a comprehensive array of general ledger accounting, financial control, and budget planning features. Also, MAPS/GL is integrated with MAPS/MODEL, a true decision-support tool.

Designed by accountants, MAPS/GL not only satisfies today's basic accounting and report delivery needs but also goes beyond the requirements of technically sound general ledger software. MAPS/GL can easily handle varied and changing information requirements in the years ahead.

Price: $25,000 – $35,000
Contact: Jack Brown
(415) 856–1100
ROSS SYSTEMS, INC.
1860 Embarcadero Road
Palo Alto, CA 94303

MBA

Operating System: VMS
Keywords: • Banking

This program for the credit union industry features share, loan, and certificate processing; automated share draft; an integrated interface program to general ledger; proprietary and switch ATM; and audio response.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Jack Kreamer
(901) 794–5501
ECOM SYSTEMS, INC.
2500 Mt. Moriah, Suite 720
Memphis, TN 38115

MBS–AP (Manus Business Systems — Accounts Payable)

Operating System: VMS
Keywords: • Accounts payable

The Accounts Payable module gives the MBS user control over cash disbursements and related accounting functions. The module operates as an automatic vouchering system to accumulate information on vendors, vendor invoices, discounts, and expense distributions. The system produces complete prepayment information, writes approved

checks and related reports, includes check reconciliation, and maintains historical data for analysis. A special inquiry function produces an immediate report of cash requirements within a user-specified period for a particular bank.

Several interactive entry functions are provided to enter vouchers, modify their status in the system, permit check voiding, and reconcile returned checks. All entries are accumulated and stored to provide necessary audit trails.

All entries must have a unique voucher number assigned for audit and control purposes. A payable voucher can be classified as a 1-time purchase or as a contractual recurring payable commitment. For recurring payables, the system automatically generates the payment voucher each time payment is due, with no further manual input necessary.

The Accounts Payable module interfaces with the MBS General Ledger module.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Gary Vowels
(206) 285–3260
MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

MBS–AR (Manus Business Systems — Accounts Receivable)

Operating System: VMS
Keywords: • Accounts receivable

This module provides all capabilities required for receivables processing and control. Accounting personnel can maintain a customer master file and record charges and credits for those customers on file with appropriate general ledger distributions generated to offset the transaction amount. The Accounts Receivable module gives the MBS user accurate working knowledge of outstanding accounts, individual customer credit positions, and incoming cash. Both open-item and balance-forward methods are supported.

Receivables may be created either through the Order Processing interface or by entering invoices directly into the Accounts Receivable module. Functions are included for entering invoices, cash receipts, and memos.

Several functions provide status and audit trail reporting. In many cases, those reports enable the user to supply special selection and sorting criteria. Reports, including Aged Trial Balance, Receivables Ledger, and Monthly Statements of Account, can be produced, showing

all open-item detail, including past and current finance charges. Inquiry functions provide immediate access to the receivables files and to historical credit information.

The Accounts Receivable module may operate as a stand-alone module or be integrated with the MBS Order Processing and General Ledger modules.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Gary Vowels
(206) 285–3260
MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

MBS–GL (Manus Business Systems — General Ledger)

Operating System: VMS
Keywords: • General ledger

This comprehensive package can handle the financial reporting requirements of various businesses. The system supports up to 13 reporting periods for each fiscal year, maintains 13 monthly budgets, and allows a chart of account numbers of up to 12 digits. Journal entries may be entered directly into the General Ledger module in a tightly controlled fashion or interfaced in detail or summary form from subsidiary modules. Both recurring standard journal entries and accrual entries, which are automatically reversed in the following period, are supported. Automatic allocations processing is fully implemented.

A special Financial Report Generator allows the user to create custom financial reports that specifically match the reporting needs of the organization.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Gary Vowels
(206) 285–3260
MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

Minicomputer Business Systems

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable
• General ledger • Order entry

The following packages comprise the Minicomputer Business Systems:

- General Ledger Financial Reporting Package (G/L), a highly flexible, simple-to-operate system, responds to management's essential reporting needs. Features include free-form structure, budget capability, prior-period comparisons, reporting flexibility, percent-to-total calculations, future-period processing, inquiry capability, and controls and audit trails.
- Accounts Payable Package (A/P), used with the G/L package, features a single posting that automatically posts to both systems. Special features of the A/P system include payment flexibility, multiple distributions, next-period processing, controls and audit trails, and an inquiry capability.
- Accounts Receivable Package (A/R) can be linked to the Order Entry package to automatically update customer balances when invoices and credit memos are prepared. Special features include inquiry capability, flexible reporting statement printing, and flexible cash receipt accounting.
- Order Entry, Invoicing, and Inventory Control Package (O/E) is an integrated group of programs designed to control perpetual inventory records and to prepare sales order acknowledgments, picking lists, invoices, and sales management information. Features include inquiry capabilities, automatic inventory checks, flexible pricing and discounting, automatic credit checks, and various inventory and sales analysis reports.

PMM/MBS software programs provide the manager or decision maker with a complete environment that not only produces reports for control and decision making but also incorporates data management and maintenance facilities. The software accommodates needs ranging from simple on-line inquiries to comprehensive reporting.

Common features of PMM/MBS software programs include operator prompting, menu-driven programs, similarity of programs, master-file protection, structured input controls, immediate on-line inquiry, and selective reporting.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $8000
Contact: Victor Goldberg, Principal
(212) 872–7732
PEAT, MARWICK, MITCHELL & CO.
345 Park Avenue
New York, NY 10154

MINTAX (Personal Income Tax System)

Operating System: VMS
Keywords: • Taxes

This system prepares federal income tax returns. Input is provided from interview forms completed by the tax preparer and is entered on line by the system operator. The system calculates and prints most federal forms and tax schedules: A, B, C, D, E, F, G, R, SE, TC, 2106, 2119,

2210, 2240, 2441, 3468, 3903, 4136, 4562, 4625, 4726, 4797, 4952, 4972, 5329, 5695, 6251, Office in Home Statement, Education Expenses Statement, Miscellaneous Income, Proforma (worksheet for next year's data), 1040, and 1040–ES. Diagnostic reports, taxpayer letters, invoices, and labels are also prepared. Forms are approved annually by the IRS. A Personal Tax Planning module is available. California state returns are also prepared.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Richard Long
(415) 462–6330
MINI SYSTEMS, INC.
5726 Sonoma Drive
Pleasanton, CA 94566

NCS (National Creditor System)

Operating System: VMS
Keywords: • Accounts receivable • Billing • Credit • Financial management

Memory required: 256KB.

This on-line, interactive system for credit verification and collection, written in BASIC–PLUS–2, handles credit entry through collection for single- or multidivision organizations, collection bureaus, or legal operating from any number of locations. NCS uses video or hard-copy terminals to maintain creditor, collection type (service), and debtor information in an on-line data base with selective access control. The information in the data base is protected by highly sophisticated data security schemes designed to meet FDCPA legal requirements.

The system uses the latest letter-quality printers and allows a selection of preprinted forms or letterhead, single-sheet or continuous forms, and fixed-test or variable-test insertion. Output is formatted to the highest standards of test processing.

NCS features on-line interactive capabilities for entry, update, and inquiry of creditor information; collection process (system); debtor information: bad checks, employers, litigation history, and collection feedback; and operator and agent information.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $17,000
Contact: Madlen R. Connor
(614) 231–2130
MBA SYSTEMS AUTOMATION, INC.
3477 E. Livingston Street
Columbus, OH 43227

OPS (On-Line Payroll System)

Operating System: VMS
Keywords: • Payroll

This financial and administrative package is designed for colleges, universities, school boards, municipalities, and paragovernmental agencies. OPS features user-defined earnings deductions, benefits, labor distribution, and frequencies; on-line data entry and validation; vacation advance processing; absentee control and bank facility; master file maintenance and updates; extensive audit trails; salary grid, payroll check reconciliation, and payroll projections, using salary grid; comprehensive payroll/employee reports; a report writer; and automatic interface to BAS (Budgetary Accounting System).

A version of this product is available for the PDP–11 computer.

Price: $30,000 (Canadian)
Contact: Dennis Sakamoto
(416) 433–2100
S.R.B. INTERNATIONAL LTD.
Whitby Corporate Centre
209 Dundas Street E., Suite 205
Whitby, Ontario L1N 7H8
Canada

Order Entry

Operating System: MicroVMS, VMS
Keywords: • Order entry

This package is programmed in VAX BASIC combined with limited use of file-driven procedures. The package interfaces with the RSC Accounts Receivable automated system to facilitate the processing of sales and/or service orders into accounts receivable invoices with maximum speed and efficiency.

The Order Entry package controls the entry of sales or service orders, as well as any prepayments or deposits accompanying the orders. Every order is related to a specific customer account and is transformed into an invoice after shipping data is entered. Routines include printing orders, invoices, and credit and debit memos. All data entered is validated before being accepted by the system. The complete audit trail traces all activity to its source and determines at any time what is on order (back order) on a customer, product, or salesperson basis. Salesperson activity and commission history is maintained by customer(s) and can be extended to the product level.

All system codes, reference numbers, valid print devices, file specifications, on/off switches, and default information are user accessible and easily maintained. Multiple branches and companies (with or without separate data files) are handled by the Order Entry system, and user-maintainable menu and security systems are included, with security at both the program and option levels.

This package interfaces with the RSC Accounts Receivable, Inventory, General Ledger, Purchase Order, and Job Costing modules.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Linda Wingfield
(919) 766–0571
RESOURCE SYSTEMS CORP.
4000 Clemmons Avenue, P.O. Box 1546
Clemmons, NC 27012

Order Entry and Inventory

Operating System: VMS
Keywords: • Billing • Inventory • Order entry • Sales analysis

This menu-driven system has on-line capability for up to 64,000 inventory items, with 14-character product code fields for each item. The system includes information on product availability and pricing, product categories, three prices, average cost, quantity on hand or on order, average lead time, quantity reserved or back ordered, economic order quantity, discount codes, taxable status, picking sequence, month-to-date and year-to-date quantity sold and costs, and comprehensive sales analyses by product, by categories, by customers, or by sales representatives. This system interacts with other Armadale business packages programmed in Pascal II.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3000
Contact: Michael G. Sifton
(416) 477–8000
ARMADALE SYSTEMS INC.
Toronto Buttonville Airport
Markham, Ontario L3P 3J9
Canada

Payroll

Operating System: VMS
Keywords: • General ledger • Payroll • Taxes

Deductions, attachments, and vacation pay are simple matters on this system. Allowance is made for 5 taxes and 11 deductions (fixed and/or miscellaneous). Totals are carried for both fiscal year to date and calendar year to date. Paychecks may be produced weekly, monthly, semimonthly, every two weeks, or any number of days. Complete payroll reporting includes W–2 and 941 forms, as well as a detailed user-defined analysis of payroll distributions by department and type of work. Payroll checks and a check register are produced automatically. The distribution of earnings automatically interfaces with ADD's General Ledger system.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $4000

Contact: Bruce A. Bott, President
(201) 584–4026
ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

Payroll

Operating System: VMS

Keywords: • Payroll

This menu-driven system maintains employee and personnel file data; calculates holiday, vacation, sick, or miscellaneous pay, based on regular, overtime, and premium wage scales; has up to eight standard deductions, including savings bonds, which may be prioritized with maximum limits; and provides pay frequency set by the user, with month-to-date, quarter-to-date, and year-to-date totals returned for all data. Payroll prints pay checks and produces payroll, tax, deductions, earnings, and payroll history registers; voids checks; and includes handwritten checks in the system. Payroll interacts with other Armadale business packages programmed in Pascal II.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3000

Contact: Michael G. Sifton
(416) 477–8000
ARMADALE SYSTEMS INC.
Toronto Buttonville Airport
Markham, Ontario L3P 3J9
Canada

Payroll

Operating System: VMS

Keywords: • Payroll

This module can either stand alone or be integrated with the Business Information System. The module performs calculations for pay, deductions, fringe benefits, payroll accrual, and labor distribution and, if purchased with the general ledger module, makes journal entries automatically. Hourly, salary, commission, and special pays are accommodated. Paychecks, stubs, and a check register are printed, as well as W–2s quarterly, 941A forms, and others.

Vacation, sick, holiday, personal leave, and other paid time-off balances can be kept and accruals made for employer records and general ledger purposes.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Janna McMillan
(617) 275–5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

Payroll

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Payroll • Personnel • Taxes

This fully integrated on-line multiuser UNIX*-based payroll system provides for either salaried or hourly personnel and maintains both earning and deduction histories for each employee. Payroll checks, tax deposit checks, and deduction deposit checks are printed automatically. The system allows printing multiple checks for an employee in a payroll period (accommodates vacation and bonus checks) and supports manual or handwritten checks. Either manual or computer-generated checks may be voided. The system calculates taxes and standard deductions and provides separate deduction registers for each type of deduction. Tax reports (such as 941 and W–2 forms) are printed and may be used to substantiate payments sent to unions and savings plans. A variety of standard or 1-time deductions is supported. Deduction codes may be user defined. Standard deductions can be a set amount and/or a percentage of the regular hours. Tax formulas are stored in easily modified tables to facilitate changes when tax laws change. Earnings may be allocated to multiple G/L accounts, and automatic interface to both G/L and job costing is provided.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division. Timely information is assured through the automatic updating of the G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Payroll

Operating System: VMS
Keywords: • Data dictionary • Payroll

This program provides all the forms, programs, and procedures necessary to perform the payroll function. Menu orientation makes this system easy to learn and simple to use. With the system's effective error reporting and interactive editing of input information, most errors can be identified and corrected before reaching the main system.

Reviewed annually by outside accountants, this system has a complete, easy-to-follow audit trail and is continually kept up to date. Comprehensive reporting includes year-to-date and quarter-to-date registers, preliminary and final payroll journals, earnings and labor distribution reports, deductions reports, and a variety of reports on historical information.

The program may be run stand alone or may be interfaced with a companion general ledger system. The documentation includes detailed operating procedures, flow diagrams, file layouts, report samples, program operating instructions, and a dictionary of data and terms used in the system. Complete support and training are available.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $7500
Contact: Sharen Robinson, Sales Assistant
(219) 935–5121
PLYCOM SERVICES, INC.
P.O. Box 160
Plymouth, IN 46563

Payroll (Canadian)

Operating System: VMS
Keywords: • Payroll • Personnel

This system, designed to work with the Computer Management System, is table driven, with all files processed by data dictionaries. The system can be adapted to cover a wide range of requirements and to meet the needs of any Canadian organization. The system may also be used as is. More than 100 programs are included for building a customized set of payroll programs.

The payroll and personnel master files are maintained in both numeric and alphabetic sequence for easy access and inquiry. The system is self-verifying, with audit trails of all processing.

The Payroll system is used in construction, entertainment, government, manufacturing, processing, and sales.

A version of this product is available for the PDP–11 computer.

Price: $8000
Contact: Bill Hay
(204) 888–5253 or 832–3680
BILL HAY & CO.
1164 Crestview Park Drive
Winnipeg, Manitoba R2Y 0W6
Canada

Payroll (Canadian)

Operating System: VMS
Keywords: • Employment • Payroll • Personnel

This system, which meets the requirements of Canadian companies, is based on an employee master file and a time-recording transaction file. The employee master file stores personnel information, fixed payroll deductions, year-to-date accumulations of taxes and deductions, and miscellaneous codes for salaried employees only. The time-recording transaction file stores the input of time card data for hourly employees. The files integrate to produce checks and payroll journals for hourly employees. The system meets requirements for hourly, salaried, and executive employees. Labor expense for salaried employees may be allocated on a percentage basis to certain departments. Direct labor expense is distributed for hourly employees through time card entry.

The system allows custom selection of deductions, benefits, personnel data, and other items by employee. The payroll may be run weekly, biweekly, monthly, or semimonthly. Audit trails can be generated showing all payroll transactions and changes to the employee master file. Plus, the previous 52 weeks of UIC insurable earnings are automatically calculated and stored by employee to facilitate issue of separation certificates. The Payroll system interfaces to the General Ledger through transactions that are automatically generated for all payroll earnings and deductions. High-level security restricts access to unauthorized users. Printing features include T–4 forms, the preedit report, payroll register, check register, General Ledger report, and payroll history report. Plus, descriptions of earnings and deductions are printed by the check-writing program. Thus, descriptions do not need to be preprinted on the check stub. Changes or additions to employee earnings and deductions are accommodated as well.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $15,000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

PAYSOLVE (Payroll)

Operating System: VMS
Keywords: • Payroll

This comprehensive, easy-to-operate payroll package is written in COBOL and meets all existing statutory requirements. PAYSOLVE can be used for weekly, fortnightly, monthly, lunar monthly, and quarterly payrolls and year-end procedures. The package offers full up-to-gross calculation, including 99 pay elements, such as overtime, holidays, sickness, bonuses, and so on, as well as complete gross-to-net calculation — tax, NI up to nine pension schemes, and rounding. Open-format payslips, checks, analyses, summaries, and so forth are provided, as are user-generated reports and maintenance procedures. Security is maintained through passwords and checks on non-paid/highly paid staff. Full SSP facilities and BACS are provided. Also available are optional labor costing and automatic normal ledger interfacing (to SCC General Package or FINCON/IMPCON).

A version of this product is available for the PDP–11 computer.

Price: £3000 – £12,000
Contact: M. J. Bradley, Sales and Marketing Manager
0905 53335
STAVELEY COMPUTING
Blackpole Road
Worcester WR3 8TH
United Kingdom

Perspective/700 Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Cost accounting • Financial analysis

This system provides expense control, cash management, and simplified accounting procedures for multiuser, multicompany organizations. The system automatically computes multiple vendor discounts, schedules invoices for payment, posts to General Ledger, handles repetitive payments, and allows automatic or manual expense distribution to G/L.

Features of the system make payment easy. The system allows vendor class codes, discounts and freight itemized by vendor and invoice, and duplicate invoice checking. Complete accounting controls, computer check writing, and a check register are also included. The system can handle partial and selective payments. Other features include a cash-requirement forecast, an interface to Purchasing, foreign-currency conversion, and generation of federal 1099 forms.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $5000
Contact: Michael B. Andelman, President
(312) 953–2220
LIOCS CORP.
246 E. Janata Boulevard
Lombard, IL 60148

Perspective/700 Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable • Billing • Financial analysis

This system provides up-to-the-minute credit status to help streamline collection activities and the timely production of customer statements and financial statements. This flexible multiuser, multicompany system supports open-item or balance-forward accounts, selective finance charges and statements, and unpaid or partially paid invoices. Plus, the system allows on-line inquiry of customer account status and history by customer name, account number (and, for VAX users, zip code and telephone). Special pricing is allowed for individual customers. The system also calculates prompt payment discounts and volume discounts. The system allows balance and control points and on-line posting of cash receipts.

The system performs many tasks automatically, such as the automatic invoice update from the Order Entry system and the automatic sales tax reporting for taxable and nontaxable accounts. The system can also generate a detailed aging list and perform exemption reporting to highlight problem areas.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $5000
Contact: Michael B. Andelman, President
(312) 953–2220
LIOCS CORP.
246 E. Janata Boulevard
Lombard, IL 60148

Perspective/700 General Ledger

Operating System: VMS
Keywords: • Financial planning • General ledger • Inventory • Order entry

This system can help you control your business with comprehensive up-to-date financial information. Information is maintained for current year, previous year, and budgets, allowing analysis of current-year performance versus previous-year or business plan objectives. Combined with DIGITAL's DATATRIEVE Report Writer, Perspective/700 General Ledger allows you to design your own reporting format for income statement, balance sheet, and additional financial reports. The system is versatile and easy to learn.

The system provides various scheduling, such as a monthly profit-and-loss balance sheet, trends by month and history for 26 accounting periods, comparison to previous periods, 13 accounting periods (optional), and a fiscal year different from the calendar year. This system also handles multiuser, multicompany reporting and provides complete audit trails, a comparison of actual to budget, and multiple levels of consolidation. The chart of accounts features a user-defined account number format. Recurring entries are allowed, and the system is automatically updated from all Perspective/700 applications. The system also includes security features.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $5000

Contact: Michael B. Andelman, President
(312) 953–2220
LIOCS CORP.
246 E. Janata Boulevard
Lombard, IL 60148

Perspective/700 Purchasing

Operating System: MicroVMS, VMS

Keywords: • Accounts payable • Bill of materials • Inventory • Purchasing

This program's automated record keeping and valuable reports can help you gain control of procurement activities. Purchase orders may be filed by vendor and by receiving warehouse. The requested shipping date and the cancellation date of each purchase order are retained on file, along with shipping terms. When this program is combined with Perspective/700 Customer Order Processing and Inventory, up-to-date product requirements can be determined. A vendor item number cross-reference is available to allow the vendor's part number to be entered and/or printed on the purchase order. Entry of inventory receipts automatically updates inventory on order and on-hand quantities and maintains receipt information by individual line for the purchase order. Reports of open, partially and fully received purchase orders are available. An overdue-shipment report allows the review of purchase orders that are due for shipment within a selected time frame.

Price: $4000 – $13,000

Contact: Michael B. Andelman
(312) 953–2220
LIOCS CORP.
246 E. Janata Boulevard, Suite 262
Lombard, IL 60148

PHENIX PASS

Operating System: UNIX* (Berkeley)
Keywords: • Cost accounting • Query facilities • Report writer

This assets accounting system features a complete register of assets; historical or current cost methods; various depreciation bases; an interface to nominal ledger; group assets, consolidations, transfers, and part disposal; comprehensive reports; inquiry facilities; and reminders.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: T. J. McAllister
(44) 232–247433
SOFTWARE IRELAND LTD.
26 Linenhall Street
Belfast BT2 8PJ
Northern Ireland

Pioneer COMMAND Accounts Payable Module

Operating System: VMS
Keywords: • Accounts payable

This module, developed by Pioneer Software International, is an interactive, on-line, user-friendly comprehensive account-management system. The module may be installed stand alone or as part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND System is written in BASIC–PLUS–2 and requires a minimum of 64K words. Because the system is based on Userware International's USER–11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The Accounts Payable module allows for extensive flexibility in dealing with individual accounts, which may be either balance forward or open item. Outstanding transactions are aged into six periods. The module provides for unallocated payments and for partial payments. A variety of screen displays are available to review vendor balances, account status, or detailed data on selected transactions. Numerous reports are available, including cash requirements, audit statements, disputed-invoices list, address labels, checks, general ledger summary, and others. The module automatically interfaces with Purchase Order Processing and General Ledger.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745–6006
USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

Pioneer COMMAND Accounts Receivable Module

Operating System: VMS
Keywords: • Accounts receivable

This module, developed by Pioneer Software International, is an interactive, on-line, user-friendly, comprehensive customer-account management system. The module may be installed stand alone as part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND System is written in BASIC–PLUS–2 and requires a minimum of 64K words. Because the system is based on Userware International's USER–11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The Accounts Receivable module allows extensive flexibility in dealing with individual or groups of accounts. Individual customers can be assigned to a group account to facilitate central statement production. Cash received from group accounts can be distributed over individual accounts, which may be either balance forward or open item. Outstanding transactions are aged into six periods. The module provides for unallocated cash and a variety of debit/credit transactions, including returned checks, invoices, debit memos, and debit and credit adjustments. A variety of screen displays are available to review customer balance, account status, or detailed data on selected transactions. Numerous reports are available, including aged accounts receivable, credit limit, and others. The module automatically interfaces with Sales Order Processing and General Ledger.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745–6006
USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

Pioneer COMMAND General Ledger Module

Operating System: VMS
Keywords: • General ledger

This module, developed by Pioneer Software International, is interactive, on line, and user friendly and provides a comprehensive set of corporate, financial, and management accounting reports for all levels of management. The module may be installed stand alone or as part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Because the system is based on Userware International's USER–11 Data Base Management System, extensive on-line inquiry and ad hoc reporting are available.

The General Ledger module handles multicompany and multi–cost center (department or branch) accounts. Provisions are made for last year's results and for budgets and budget revisions. The module supports 12 or 13 operating periods. The user-defined account code may be up to 25 characters long. For accounts used frequently, a short look-up code of up to four characters may be used. Fixed journal entries (accruals and reversals) may be recorded in a fixed journals file, which also contains details of the accounts and periods affected. Those amounts may be spread on a percentage basis over a number of accounts. Budget records may be integrated for any account, using individual values or percentages of an annual value. A variety of screen displays are available to review account balances and to show account detail and budget information. Numerous reports are available, including trial balance, income statement, balance sheet, and audit reports. A financial report generator provides a flexible means of reporting any value or combination of values in any of the financial records. The module automatically interfaces with each of the other COMMAND modules. Complete documentation is available to facilitate interface to other user-written applications.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000

Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745–6006
USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

Plycom Core Accounting Systems

Operating System: VMS

Keywords: • Accounts payable • Accounts receivable • General ledger • Payroll

These simple yet flexible packages were designed by accountants for accountants. Operation is interactive, uses extensive prompting, and fully utilizes RSTS/E and VMS yet retains security and ease of recovery of batch and manual systems. Batch controls are on all data, accounting controls are preserved, interim data is held separate until verified and then passes into the regular files, an excellent audit trail exists throughout, and the file and report structure divides information into the user's own traditional accounting periods.

- Accounts Receivable allows complete receivables control through varied account reports, on-line inquiry by customer number or name, flexible yet controlled entry of cash receipts, numerous customer options (balance forward or open item, customer type, credit limit, and so on).
- Payroll provides easy maintenance of employee records, multiple payrolls, labor distribution reports by distribution code or pay type (regular, premium, and other) within department and division, excellent printer control for special forms, and user-defined deduction and labor codes.
- Accounts Payable allows complete control over discounts, payment scheduling, and cash requirements forecasting; flexible reporting, including past history as well as current information; and excellent printer control for special forms.
- General Ledger provides on-line availability to all journal entries and purchase distributions for the entire fiscal year. Account inquiry for detail or balances automatically feeds the Financial Reporting Package. A complete audit trail from journal entry to Financial Reports includes trial balance and trial balance in 10-column worksheet format for easy period reconciliations.
- Financial Reporting includes complete flexibility in statement formatting; multiple formats, with automatic feeding from regular, history, or budget general ledgers; and comprehensive multientity reporting with multilevel consolidations, eliminations, or adjustments.
- Fixed Assets includes all the programs, forms, and procedures necessary for complete asset reporting; accommodates reporting assets for both book and tax purposes; and includes depreciation forecasting and an automatic interface to the General Ledger.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $35,000

Contact: Sales Representative
(219) 935–5121
PLYCOM SERVICES, INC.
P.O. Box 160
Plymouth, IN 46563

Practice Management

Operating System: VMS

Keywords: • Accounts receivable • Billing • Management

This system simplifies the recording and reporting of time and expenses. In the system, clients are stored by billing responsibility. Clients may be tracked on an engagement-by-engagement basis. The reports and management analyses are printed to monitor staff, clients, work codes, and profit areas in the firm. The system can accommodate firms with more than one office. All reports are directed to the billing responsibility, the firm, or the particular branch.

The system maintains a fiscal year billing history, which is used to analyze current clients and to project the budget for the coming year. The system offers progress billings or final billings, allows the writing up or writing down of charges, and generates statements and invoices.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $7500
Contact: Marc Alexander, National Sales Manager
(503) 641–8100
ALPINE DATASYSTEMS, INC.
8043 SW Cirrus Drive
Beaverton, OR 97005

Prime Fixed-Asset System

Operating System: VMS
Keywords: • Banking • Fixed assets • Inventory

This system, written in BASIC, automates the recording and control of a company's fixed-assets inventory. Every asset is specifically recorded, and all accounting entries are generated for purchase, depreciation, retirement, and disposal. Depreciation is calculated on a monthly basis, using the straight-line method. All accounting entries can be interfaced to an existing general ledger system.

Fixed assets may be segregated by fixed-asset type, providing flexible accounting allocations. Assets can be grouped by location, type, number, cost center, and last depreciation date. Information stored for each fixed asset includes asset name, type, number, cost and location; cost center; serial number; date entered, sales tax, salvage value, and useful life; and last depreciation date, depreciation type, monthly depreciation amount, and accumulated depreciation. Existing fixed-asset records may be modified, deleted, retired, and disposed. A history file of retired or disposed assets is maintained.

The following reports are prepared: accounting journal, daily transactions, and fixed assets by location, by type, by asset number, and by cost center. Special reports may be easily produced using DATATRIEVE.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $10,000
Contact: Salvatore Cangialosi
(212) 946–5796
PRIME ASSOCIATES, INC.
38 Paerdegat 7 Street
Brooklyn, NY 11236

PTB (Professional Time and Billing)

Operating System: VMS
Keywords: • Accounts receivable • Billing • Report writer
Distribution media: RL02, RX02.

This package tracks and invoices professional time/units to specific jobs. The invoicing function automatically updates Accounts Receivable.

Staff hours/units may be billed to a job at up to 10 rates. Prebilling sheets listing the current status and all past activity to the job are produced. As activities are selected for billing, writeups/offs are entered.

PTB produces numerous management and job reports. Management reports, many of which are designed with plotting capabilities, include staff and department productivity reports, comparisons of time and actual cost for each service performed, comparisons of job estimates to actual costs, service code summaries and project, market, and company profit reports. Accounts receivable reports include aged trial balance, client status, monthly cash, and sales summary. Job reports include client and job address cross-reference, market and department job listing, and jobs by date promised.

PTB allows a maximum of 99,999,999 jobs, 999,999 clients, and 999 staff members.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $8000
Contact: Dwight Johnson
(303) 574–8086
PROFESSIONAL COMPUTER SERVICES
2345 N. Academy, Suite 209
Colorado Springs, CO 80909

Purchase Order Accounting

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Manufacturing • Purchasing

This fully integrated on-line multiuser UNIX*-based purchase order accounting system prepares purchase orders, maintains records of expected delivery dates, accepts receipts information, and provides reports of items that need review. The system provides for multiple receipts, partial receipts, back orders, returns, allowances, adjustments, and items damaged during shipment. Open-order analysis reports are available by product, vendor, or buyer. A change-in-status report by item can be produced, showing open purchase orders at start of period, new orders, receipts, and open purchase orders at end of period. That order can be organized by item, by item within vendor, or

by item within buyer. Future orders may be entered, and stock requirements reports can be printed to assist with long-range manufacturing plans.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division. Timely information is assured through the automatic updating of G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Purchasing Management System

Operating System: VMS
Keywords: • Purchasing • Query facilities • Real time • Security

This system, written in ANSI COBOL, automates control of the purchasing cycle, processes as a stand-alone purchasing system, and interfaces with the in-house accounts payable and/or inventory systems. Purchasing features real-time entry and updating of purchase orders, change orders, debit memos, and receiving data; real-time purchase order printing; and standing and blanket order processing. Inquiry includes six prior purchases of an item; item/vendor evaluation, with user-specified weighting of price, quality, and delivery variables; requisition status; material on order; and receipts in process. Reports consist of open and overdue purchase order status, receiving, blanket purchase order status, and purchase order history. Optional modules include real-time entry and updating of requisitions, request for quotations, and inspection data.

Price: $8000 – $20,000
Contact: William J. Arnold
(502) 426–9449
BELLWETHER CORP.
9900 Shelbyville Road, Suite 6B
Louisville, KY 40223

PY–11 (Payroll)

Operating System: MicroVMS, VMS
Keywords: • Payroll • Personnel • Taxes

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system features on-line payroll calculations for all types of pay and deductions, including federal and multiple states' income taxes. User-designed forms allow all types of governmental reporting, including federal and state payroll tax reports, state unemployment and disability reports, and W–2 forms. Other user-oriented features include:

- User-defined employee numbers with up to 11 characters and 4 user-defined fields for each employee record to store additional personnel information
- A user-designed check form that accommodates almost any check design
- The choice of processing employee payroll checks individually or automatically for a group of employees
- Table-driven tax calculations for federal and state income tax withholding, including supplementary pay, social security tax, and earned-income credit
- Multiple pay rates, including shift differentials, and multiples of regular rates
- User-defined pay/deduction types, including automatic cutoffs based on hours, amounts, or date
- Vacation and sick leave accrual
- An audit trail for all entries provided by transaction journals and change logs
- A detail posting collapse feature that allows W–2s and governmental reports for prior payroll periods to be printed after new payroll information has been entered
- A password security system
- Adaptable to Canadian payroll requirements
- Interfaces to CN–11 Job Cost and GL–11 General Ledger; other complementary products include the AP–11 Accounts Payable, AR–11 Accounts Receivable, FA–11 Fixed Assets, OE–11 Order Entry, and IC–11 Inventory Control systems

PY–11's reports include employee listings, a check register and employees' checks report, historical general ledger distributions, earnings by payroll code, rate change and rate review reports, terminated employees, quarterly reports, and tax table listings.

The PY–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $1600 – $7500
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

Random Number Generator

Operating System: VMS
Keywords: • Audit • Mathematics • Statistics

This program enables the accountant preparing for an audit to quickly and easily select random samples of checks, invoices, journal entries, and so on. No longer must random-number tables be consulted and lists prepared manually.

The basis for generating the random-number tables is a seed number, an unbiased 6-digit number, such as your birth date or the hour of the day. Optionally, the system will generate the seed number if manual entry is not desired.

The Random Number Generator offers simplicity of operation and automatic reporting and provides for a valid statistical sampling of transactions. The system features:

- Menu application selection
- Generation of up to 100 random-number schedules for each batch
- Sample size range to four digits
- User-selected output — unsorted output without sequence numbers, sorted output with or without sequence numbers, unsorted and sorted output
- User-selected formats — nonoverlapping series, overlapping series, page/number series, alphanumeric series

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

RAS (Receivable Accounting System)

Operating System: VMS
Keywords: • Accounts receivable

This financial and administrative package is designed for colleges, universities, school boards, municipalities, and paragovernmental agencies. RAS features centralized, on-line cash receipts; open-item accounts receivable; multiinvoicing system capability; multilevel

inquiry; automatic interface to BAS (Budgetary Accounting System); user-defined interest calculation parameters; and automatic application of open credit notes.

A version of this product is available for the PDP–11 computer.

Price: $15,000 (Canadian)
Contact: Dennis Sakamoto
(416) 433–2100
S.R.B. INTERNATIONAL LTD.
Whitby Corporate Centre
209 Dundas Street E., Suite 205
Whitby, Ontario L1N 7H8
Canada

RealWorld Software: Accounts Payable

Operating System: UNIX* (Berkeley, System III, System V)
Keywords: • Accounts payable

This system, developed by RealWorld, has vendor file maintenance and lists and allows entry, editing and posting of new payables, adjustments, cancellations and prepaids with edit list and journal, and on-line vendor account inquiry. The system prints the cash-requirements report, A/P checks, the check register, a report showing A/P distributions to the general ledger, the vendor analysis report, and the open-item report. Accounts Payable may be interfaced to the RealWorld General Ledger or used stand alone.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $850 – $1250
Contact: Vern Pang
(714) 978–1212
INFORMATION MANAGEMENT ASSOCIATES, INC.
1437 W. Palmyra
Orange, CA 92668

RealWorld Software: Accounts Receivable

Operating System: UNIX* (Berkeley, System III, System V)
Keywords: • Accounts receivable • Calculation aids

This system, developed by RealWorld, handles both open-item and balance-forward customers; provides maintenance and lists of both the salesperson and customer files; allows sales transactions entry, editing and posting with edit list and journal, cash receipts entry, posting with edit list and journal, and on-line customer account inquiry. The system automatically calculates and posts finance charges with edit list and journal; controls sales commissions due; and prints the commissions-due report, the aging report, and statements.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $850 – $1250

Contact: Vern Pang
(714) 978–1212
INFORMATION MANAGEMENT ASSOCIATES, INC.
1437 W. Palmyra
Orange, CA 92668

RealWorld Software: General Ledger

Operating System: UNIX* (Berkeley, System III, System V)

Keywords: • General ledger

This system, developed by RealWorld, handles up to 13 accounting periods; supports multiple profit centers; has chart of accounts maintenance and list; and allows general journal transaction entry, editing and posting with edit list and journal, and on-line G/L account detail inquiry. The system prints the general ledger worksheet and trial balance reports, the source cross-reference report, and the financial statements in flexible, user-defined formats.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $850 – $1250

Contact: Vern Pang
(714) 978–1212
INFORMATION MANAGEMENT ASSOCIATES, INC.
1437 W. Palmyra
Orange, CA 92668

Report Writer

Operating System: VMS

Keywords: • Report writer

This product allows the user to define customize reports, based on any combination of fields found in records contained in the financial data base files. Up to six data base files can be accessed at a time. Mathematical operations as well as sorting and updating actual programs can be written using the Report Writer commands. Report Writer interacts with other Armadale business packages programmed in Pascal II.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3000

Contact: Michael G. Sifton
(416) 477–8000
ARMADALE SYSTEMS INC.
Toronto Buttonville Airport
Markham, Ontario L3P 3J9
Canada

RIS Accounts Payable

Operating System: VMS
Keywords: • Accounts payable

Distribution media: magnetic tape, RL02.

This system features multicompany support, automatic interface to RIS General Ledger, manual checks that can be optionally entered and paid immediately by writing the check on a slave printer in the accounts payable department, bank reconciliation, partial payments, and invoice inquiry by vendor number or name and check number. The system is written in VAX–11 COBOL using VAX DBMS.

Price: $3000 – $10,000
Contact: David L. Ley
(313) 855–6181
RADLEY BUSINESS COMPUTERS
7071 Orchard Lane Road, Suite 305
W. Bloomfield, MI 48033

RIS General Ledger

Operating System: VMS
Keywords: • General ledger • Spreadsheets

Distribution media: magnetic tape, RL02.

This multicompany system, written in VAX–11 COBOL using VAX–11 DBMS, provides individual and consolidated profit and loss statements, balance sheets, and supporting schedules. The P & L can optionally print budgets or comparatives. The system also features accounting-period maintenance, interface to RIS Accounts Payable and RIS Payroll, a source cross-reference report, three levels of general ledger inquiry, and journal entry and posting.

RIS General Ledger contains a user-defined extract that automatically produces worksheets, allowing the user to do what-ifs with real numbers, using the Finipulator spreadsheet system.

Price: $3000 – $10,000
Contact: David L. Ley
(313) 855–6181
RADLEY BUSINESS COMPUTERS
7071 Orchard Lake Road, Suite 305
W. Bloomfield, MI 48033

RIS Payroll

Operating System: VMS
Keywords: • Payroll • Taxes

Distribution media: magnetic tape, RL02.

This multicompany system features employee file maintenance; attendance entry; payroll calculation, including taxes; check writing; interface to RIS General Ledger; payroll history report; reports of overtime/sick/vacation pay, bonuses, and anniversary; and withholding tax table maintenance (federal, state, and municipal). The system is written in VAX–11 COBOL using VAX–11 DBMS.

Price: $3000 – $10,000
Contact: David L. Ley
(313) 855–6181
RADLEY BUSINESS COMPUTERS
7071 Orchard Lake Road, Suite 305
W. Bloomfield, MI 48033

SCOUT Finanz Buchhaltung

Operating System: MicroVMS, VMS
Keywords: • Accounts payable • Accounts receivable • Financial analysis • General ledger

This accounting product is configured for German-speaking users in Austria, Germany, and Switzerland.

Price: Available upon request
Contact: Rainer Burken
(0761) 70799
DATANORM SOFTWARE GMBH
Kronenstr. 2–4
7800 Freiburg
West Germany

Software International Accounts Payable and AP–LINE Systems

Operating System: VMS
Keywords: • Accounts payable • Financial analysis • General ledger

This system provides processing and reporting capabilities for controlling expenses and managing cash disbursements and provides accurate and timely detailed and summary reporting. System functions provide a solid basis for the total payables area, including input of vouchers, distribution, disbursement, and management reporting. System features include comprehensive on-line input and inquiry capabilities, including on-line batch and invoice balancing, on-line validation against general ledger and accounts payable master files, and on-line inquiry into active and historical invoice and payment information; flexible control of distribution and disbursement accounting periods; multidivision/multilocation processing; projection of cash requirements and commitments; comprehensive and flexible interface to the general ledger system, with table-driven input to reduce keying; and proven auditability.

Price: Available upon request
Contact: Gary Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

Software International Accounts Receivable and AR–LINE Systems

Operating System: VMS
Keywords: • Accounts receivable • Data base management • Financial analysis • Report writer

This system's comprehensive exception capabilities supply vital credit and collection facts to manage cash flow and reduce bad-debt losses. Advanced system processing supports comprehensive cash management procedures, including cash application and cash projection. An extensive customer information data base provides solid data for historical analysis and credit inquiries. User controls help satisfy individual information requirements. Audit controls help ensure the integrity of information. Finally, extensive reporting capabilities supply a wide range of management reports, statements, and letters to dun customers.

Price: Available upon request
Contact: Gary Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

Software International Fixed Assets and FA–LINE Systems

Operating System: VMS
Keywords: • Fixed assets • Information management • Property management • Report writer

This system provides an extensive range of accounting, tax, and property reports; a special report writer to accommodate customized reporting; and data retrieval to satisfy governmental and internal reporting and projection demands.

The system's comprehensive asset information is easy to access and allows the user to direct the system to reflect the location and depreciation requirements of each asset. A streamlined asset arrangement groups assets with common characteristics, such as depreciation method or estimated life, thereby simplifying asset manipulation. System features include multicorporation and multicompany structure,

asset accounting, property and location control, depreciation projection, insurance valuation, construction in progress, interface to the general ledger system, lease reporting, tax control, ADR accounting, FASB33 compatibility, and ACRS and TEFRA capabilities.

Price: Available upon request
Contact: Gary M. Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

SONAK

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Accounts payable • Accounts receivable • General ledger

SONAK consists of three easy-to-use modules:

- General Ledger enables the user to set up the general ledger chart of accounts; make journal entries; run journals, general ledgers, and financial statements at any time for any period of time; and perform multiple month-end and fiscal year-end closings.
- Accounts Payable provides instruction prompting; compares new orders to original orders for price and quantity; projects future cash needs; and runs checks and creates reports for any time span, including accounts payable, balance outstanding, aged payables, and check register for paid bills.
- Accounts Receivable prints invoices, projects future cash receipts, and creates reports of the accounts receivable journal, outstanding balance, and aged receivables and cash receipts journal for bills received for any period.

SONAK was designed by business and accounting professionals and has been thoroughly tested in the business environment.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Dr. Blaine T. Garfolo
(216) 421–8737
DAYSTROM SYSTEMS, INC.
11206 Euclid Avenue
Cleveland, OH 44106

SP Accounts Payable

Operating System: VMS
Keywords: • Accounts payable • Query facilities • Report writer

This easy-to-use menu-driven system offers the accounting manager complete control over the disbursement of cash. All information entered is validated immediately to eliminate errors.

- Vendor codes may be either numbers or characters. Each vendor is referenced by code or by name during processing.
- A summary history of vouchers paid to a vendor for this year and last year is maintained.
- A detailed history of vouchers and checks for a vendor is kept on line and inquired into as needed.
- Vouchers and credit memos are entered through predefined screen formats. The invoice total must be fully distributed to expense accounts before an invoice will be accepted.
- The system automatically distributes freight and tax amounts based on the amount of each expense distribution to the total invoice amount.
- The system properly records 1099 information for each vendor.
- Checks may be processed for all invoices due or may be run for priority vendors or by type of vendor.
- Checks may be entered manually to pay open invoices.
- On-line inquiries may be made for a vendor, an invoice, or a check.
- Automatic generation of journal entries for vouchers and checks is used to interface automatically to the SP General Ledger.

Price: $5000 – $12,000
Contact: Robert Murray
(313) 971–5377
SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

SP Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable

This easy-to-use menu-driven system offers the accounting manager complete control over the collection and application of cash and the management of each customer's balance. All information entered is validated immediately to eliminate errors.

- Both open-item and balance-forward customers are handled.
- Each customer may be assigned to a territory and/or salesperson for subsequent sales analysis.
- Sales and credit transactions are entered and distributed to general ledger accounts to ensure balanced entries.
- Cash is automatically applied to the oldest invoice, or the user can apply cash to specific invoices or create cash on account balances.
- All open invoices for a customer are displayed to the user during cash application.
- Entry of non-AR cash is allowed.

- The accountant may define the number of days to be used for each of four aging categories.
- Aging may be by invoice date or due date.
- Calculation and posting of finance charges for specified customers is automatic.
- On-line inquiry shows customer balances and detailed transactions for each customer.
- Detailed statements are printed for each customer selected.

Price: $5000 – $10,000
Contact: Robert Murray
(313) 971–5377
SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

SP General Ledger

Operating System: VMS
Keywords: • General ledger • Report writer

This easy-to-use menu-driven system offers the accounting manager complete control over the financial reporting process. All information entered is validated immediately to eliminate errors.

- The accountant defines the number of levels to be used to consolidate and report financial information, including by project or product line in addition to profit centers.
- The accountant defines the size of the posting account and the groups to which the posting accounts are assigned for reporting.
- The accountant defines up to 15 balances to be kept for each account, such as budgets, forecasts, and last year's actuals, in addition to the current year's actuals.
- Multiple companies and corporations with different charts of accounts can be defined, with an unlimited number of profit centers in each company.
- Journal entries are entered interactively or through the use of a predefined standard journal or interfaced from other systems through a file.
- A report writer produces reports in special formats to complement the standard detail general ledger, trial balance, income statement, and balance sheet reports.
- The system provides for 13 accounting periods.
- Posting to the next fiscal year can begin before the prior year is closed.
- Comprehensive audit trail includes on-line access to the transactions posted to the ledger during the current year.
- On-line inquiry displays account balances and supporting transactions.
- The security system allows the accountant to control access to information by menu options or by range of profit centers or account numbers.

Price: $5000 – $15,000
Contact: Robert Murray
(313) 971–5377
SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

SP Inventory Control

Operating System: VMS
Keywords: • Inventory

This easy-to-use menu-driven system offers complete control over the level, value, and movement of inventory items. All information entered is validated immediately to eliminate errors.

- Inventory may be valued by LIFO, FIFO, standard cost, or average costing methods.
- Inventory can be located in multiple warehouses, and items may be transferred from one warehouse to another.
- Up to three prices, quantity on hand, quantity on order, reorder level, location, default GL accounts, and the selling and pricing units of measure can be stored for each item.
- Inventoried items that fall below the reorder level are printed on the purchase advice report.
- A physical count worksheet can be printed to assist in counting inventoried items.
- ABC analysis of inventoried items shows those with the highest inventory value and those with the lowest.
- This system interfaces with the Sales Order Entry system.

Price: $5000 – $10,000
Contact: Robert Murray
(313) 971–5377
SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

SP Payroll

Operating System: VMS
Keywords: • Payroll • Taxes

This system offers the accounting manager complete control over the calculation of employees' payroll and the federal and state tax-reporting requirements.

- The user can define an unlimited number of pay types, deductions, and taxes.
- Multiple companies and multiple states can be run in the same payroll.
- Deductions can be employee paid, such as charitable contributions, or employer paid, such as medical benefits.

- Tax-sheltered annuities or other forms of pay with special federal, state, or local tax handling are handled.
- Labor expenses can be allocated to multiple general ledger accounts, as well as to separate jobs or projects, on either a permanent or a temporary basis.
- Payrolls can be divided by company, division, plant, or other organizational structure. Payroll frequency can be daily, weekly, biweekly, semimonthly, monthly, quarterly, or annually.
- ACH deposits are handled for direct deposits of employees' pay.
- Reimbursement of expenses, piece-rate pay, meals, tips, bonus pay, and other exception pay types are handled.
- Automatic calculation of all federal and state taxes is available.
- W–2s, including multiple W–2s for employees who work in more than one state, are produced.

Price: $5000 – $20,000
Contact: Robert Murray
(313) 971–5377
SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

SP Purchase Order Entry

Operating System: VMS
Keywords: • Purchasing • Report writer

This easy-to-use menu-driven system allows the accounting manager to control the ordering of goods and services. All information entered is validated immediately to eliminate errors.

- PO numbers can be assigned automatically or entered by the user.
- Comments can be entered as lines on the PO.
- For each product ordered, the item number, description, quantity, and unit of measure are entered.
- Each line may be distributed to multiple general ledger accounts.
- POs and receiving forms may be printed on preprinted forms after entry.
- Automatic matching of the purchase order, the receivings, and the invoice is provided.
- Immediate encumbrance of funds by account is made when using the encumbrance accounting feature in the SP General Ledger.
- On-line inquiry may be by either PO number or vendor.

Price: $5000 – $8500
Contact: Robert Murray
(313) 971–5377
SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

SP Sales Order Entry

Operating System: VMS
Keywords: • Order entry

This easy-to-use menu-driven system offers simplified ordering and invoicing of inventoried items. All information entered is validated immediately to eliminate errors.

- Orders may be invoiced on entry or held as open orders for later billing.
- Inventoried items are automatically adjusted as the orders are made, and the invoices are sent to the accounts receivable system.
- Flexible pricing codes permit items to be priced as cost plus, volume discounts, or other special pricing.
- Orders can be drop shipped.
- Orders can be back ordered, and all back orders are reported by customer or by item.
- Credit memos are handled for returned goods, and the inventory for the returned items is automatically adjusted.
- All orders interface to the General Ledger through the Accounts Receivable system.

Price: $5000 – $10,000
Contact: Robert Murray
(313) 971–5377
SOFTWARE PLUS
2020 Hogback Road
Ann Arbor, MI 48104

Summit

Operating System: VMS
Keywords: • Financial analysis • Financial planning • Forecasting • General ledger

This accounting system can accommodate a small single-ledger system or a sophisticated multiple-company, multiple-branch environment with nominal, sales, and purchase ledgers; cost center accounting; contract ledgers; and budgeting. Information or statistical ledgers can be set up so that financial data can be distributed to one or more information ledgers during the normal data entry cycle. Summit supports historical data for comparisons and future periods for budgeting or future postings. Your choice of the number of periods held by Summit is limited only by the system's resources. Summit also provides full file protection, restricted user access, separate facilities for auditing, networking capability, virtually unlimited expansion potential, full security and backup, and on-line and batch processing modes.

Price: £17,000 – £40,000
Contact: R. Boom
(0734) 699777
D. M. ENGLAND & PARTNERS LTD.
Lytham Court, Lytham Road
Woodley, Reading
Berkshire RG5 3PQ
England

TBS Accounts Payable System

Operating System: VMS
Keywords: • Accounts payable • General ledger

This system, which automatically interfaces to the TBS G/L System, maintains a full vendor file, including the alphabetical vendor list, full accounts file, and job file; has CRT entry of new payables and CRT inquiry by vendor and automatic voucher number and batch control totals; distributes payables by G/L account and optionally by job number; allows payables to be selected for payment by type or individually, with selected items deferred; allows the use of multiple A/P, cash, and discount accounts; and contains a check-reconciliation module.

The Accounts Payable System also prints the A/P voucher register, A/P aged trial balance, A/P distribution report in detail or summary form, and the A/P job distribution, cash disbursement, and cash-requirements reports. The system also prints the check-verification report before check printing, prints checks with invoice details on the stubs, and prints the check register, which shows all computer-written, handwritten, and voided checks.

A version of this product is available for the PDP–11 computer.

Price: $995 – $2500
Contact: Chuck Tebbetts
(818) 242–7981
THETA BUSINESS SYSTEMS
1110 Sonora Avenue, Suite 106
Glendale, CA 91201

TBS Accounts Receivable System

Operating System: VMS
Keywords: • Accounts receivable

This system, which automatically interfaces to the TBS G/L System, includes customer account features, printing capabilities, and accounts receivable functions. The system handles open-item and balance-forward customers; provides full customer file maintenance with an alphabetical list; permits discount, tax, and finance charge percentages to be set to a standard default value or set for each customer; and provides CRT customer account inquiry.

The system also prints sales and cash receipts journals, the customer aging report in detail or summary form, the monthly sales and cash receipts summaries, and the A/R history finance charge, and salesperson commission-due reports. The system permits statements to be selectively printed with aged totals and a tear-off remittance.

Accounts receivable features include separate terms code and ship code maintenance modules and an A/R open file that contains full transaction details. The system automatically calculates and posts finance charges, permits on-line entry of cash receipts, and allows partial payments and payments to more than one invoice. Finally, the system permits on-line entry of sales, CR memos, DR memos, and manual finance charges with batch totals for control of transaction flow.

A version of this product is available for the PDP–11 computer.

Price: $995 – $2500
Contact: Chuck Tebbetts
(818) 242–7981
THETA BUSINESS SYSTEMS
1110 Sonora Avenue, Suite 106
Glendale, CA 91201

TBS General Ledger System

Operating System: VMS
Keywords: • General ledger

This system, which automatically interfaces to the TBS A/R, Payroll, and A/P Systems, includes user-designed features, printing functions, and general ledger tasks.

The system maintains a full chart of accounts with a 7-digit account number and a 3-digit subaccount number for profit center or cost centers; permits user-generated wording and formats on financial statements and up to 13 user-defined accounting periods; provides CRT entry of G/L transactions, which can be edited before posting and with running balance displayed during entry; allows CRT inquiry into accounts by period; and includes a recurring-entries module. The system also prints the G/L Transaction Register; the G/L Trial Balance with work space for adjustments; the G/L List, selected by account number or date with detail or summary; the G/L Analysis by source; and the Balance Sheet, Profit and Loss Statement, Supporting Schedules, and Source and Application of Funds reports.

The system automatically distributes transactions to accounts on a percentage basis, automatically generates counterbalancing entries, and handles accrual reversals.

A version of this product is available for the PDP–11 computer.

Price: $995 – $2500
Contact: Chuck Tebbetts
(818) 242–7981
THETA BUSINESS SYSTEMS
1110 Sonora Avenue, Suite 106
Glendale, CA 91201

TBS Payroll Accounting

Operating System: VMS
Keywords: • Payroll • Personnel • Taxes

This system, which automatically interfaces to the TBS G/L System, performs several payroll tasks and printing functions. In addition to maintaining extensive payroll and personal data, the Employer Master File in the system performs other payroll functions, such as permitting CRT entry of time worked and editing of transactions; automatically calculating gross and net pay rates and all standard frequencies; calculating vacation, holiday, sick, and miscellaneous pay; permitting eight standard deductions, which may be prioritized and have maximum limits; and calculating FWT, SWT, FICA, FUI, city tax, and SUI. The user can use the system to reconcile outstanding checks, enter handwritten checks, and void checks.

The system can print paychecks with the Payroll Register detailing payroll calculations, the Check Register, W–2 and 941-A forms, State Tax Registers, and the Payroll History, Labor Distribution, G/L Account Distribution, and Hours History reports.

A version of this product is available for the PDP–11 computer.

Price: $995 – $2500
Contact: Chuck Tebbetts
(818) 242–7981
THETA BUSINESS SYSTEMS
1110 Sonora Avenue, Suite 106
Glendale, CA 91201

TCB–11 (Time, Charges, and Billing for Professional Firms)

Operating System: VMS
Keywords: • Accounts receivable • Billing • Cost accounting

Distribution media: RL01, RL02, RX01.

This professional-practice management system for accounting firms provides for time, cost, and cash receipts posting by client. Work-in-process reports (prebilling ledgers) and monthly invoices are produced for each client. Accounts receivable age analysis and client statistics are provided, as well as reports about employee productivity and work/service activity. The system is usually used with Franklen's CPA–11, General Ledger/Financial Reporting System.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $6500

Contact: Frank J. O'Kane, President
(213) 441–3123
FRANKLEN COMPUTER SYSTEMS, INC.
715 Fremont Avenue
South Pasadena, CA 91030

THETA

Operating System: ULTRIX–32, VMS

Keywords: • Accounts receivable • Billing • General ledger • Payroll

This efficient, integrated accounting system, designed by THETA Business Systems, is CRT interactive, menu driven, and easy to learn and use. THETA also enables users to make quick, low-cost modifications.

THETA consists of the Accounts Payable, Accounts Receivable, Order Entry, General Ledger, Payroll Accounting, and Time Accounting modules. General Ledger users can format many types of financial statements and run them on request. A variety of fixed formats are available, as well as several run-time options.

A version of this product is available for the PDP–11 computer.

Price: $595 – $1995

Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

Thoroughbred Accounts Payable

Operating System: VMS

Keywords: • Accounts payable • Data base management • Data dictionary • Query facilities

This system can maintain up to 999,999 vendors in the Vendor Master File and generate the Vendor Master File Report automatically. The system provides vendor invoice entry and automatic updates, automatic control during data entry to ensure debit/credit balance, comprehensive file maintenance, and instant vendor and open-item inquiry at the terminal as well as hard-copy printout.

Edits and data verification can be performed on line. Complete system-generated or manual check processing is available. Payable checks are produced with check numbers and detailed payment information. Flexible invoice processing is provided for time and partial payments as well as prepaid invoices, with provision for discounts by percentage or dollar amount on invoices. The system can apply payment to the oldest invoice and offers full protection against duplication of invoice payment. Nonvendor or 1-time expenses can be entered into the system for

payment distribution. The system can handle both credits and debits to a specific invoice or vendor. The system provides automatic totals on all monthly expensed payments. Reconciliation of payable checks includes registers providing outstanding and cleared-check information.

The system generates open accounts payable, cash requirements, and accounts payable aging reports by vendor or company. Control over cash allocation is provided at the individual invoice level. The system has a multiple-account aging capability for cash-flow reports, determines cash-flow requirements for approved invoice payment, provides reporting for up to 26 profit centers, and generates automatic cash disbursement reports for designated time periods. Year-to-date and prior-year expenditures are summarized for analyzing vendor activity. System-generated mailing labels are provided, as are distribution reports for both payable and payment distribution. Automatic posting of payments and invoices to appropriate general ledger accounts is provided. Each pay cycle produces a check register that is summarized monthly. Optional purchase order and general ledger interfaces and automatic audit trails are provided.

A version of this product is available for the PDP–11 computer.

Price: $795 – $8000

Contact: Adrienne H. Webb, Sales Manager
(415) 798–0240
COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

Thoroughbred Accounts Receivable

Operating System: VMS

Keywords: • Accounts receivable • Data base management • Data dictionary • Query facilities

This cost-effective solution for measuring your company's sales performance provides timely aged management reports and statement preparation that will improve your cash flow and overall cash management. Complete open-item cash posting of credits, debits, cash, and on-account balances provides comprehensive control over receivables. Aged delinquent analysis by salesperson facilitates credit collections. Customer credit limits can be easily established to eliminate poor payers and to facilitate cash flow. File sizes are variable and expandable and are based cn the user's activity. System prompts are designed for easy operator use. The system is easily installed and maintained and can be used in either a single or a multiuser environment.

The system's Customer Master File can maintain up to 999,999 customers. The system features automatic customer master file report generation, easy data entry for customer and transaction adjustments, and instant inquiry for customer status and accounts receivable information.

The system handles complete sales, sales tax, freight, cash receipts, discounts, credits, and miscellaneous accounts receivable transactions. Nine categories of nontaxable sales are offered, and multiple state tax tables apply the appropriate sales tax to an invoice. The user may select percentage or dollar amount discounts. Interest charges can be applied to past-due accounts. Partial or total payments can be applied to individual invoices, and detailed reporting is provided on outstanding invoices, with automatic generation of delinquent reports. The system prints customer statements with optional user-determined sales or reminder messages as frequently as desired, as well as complete sales analyses by customer on month-to-date and year-to-date bases. Sales commission reports are automatically produced.

Information is provided on last customer payment date and account aging by user-defined periods. The system handles miscellaneous cash receipts and can process numerous general ledger periods. Flexible processing provides for both open-item and balance-forward customers. Trial balance with options of minimum days past due, minimum invoice amount, and detail or summary are printed automatically. The system generates mailing labels and provides for multiple-company requirements. Optional order processing and general ledger interfaces and automatic audit trails are provided.

A version of this product is available for the PDP–11 computer.

Price: $795 – $8000

Contact: Adrienne H. Webb, Sales Manager
(415) 798–0240
COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

Thoroughbred Fixed Assets

Operating System: VMS

Keywords: • Data base management • Data dictionary • Query facilities • Report writer

This system features instant asset inquiry at the terminal, automatic generation of the Fixed Asset Master Report, user-determined asset information, multiple data edit check and multiple depreciation schedules, depreciation of new assets under the Accelerated Cost Recovery System as well as standard methods, reports by asset value as well as depreciation methods, generation of intercompany transfer of assets, Added Cost reports and a Depreciation Report that summarizes current asset depreciation, and automatic audit trails. A General Ledger interface is optional.

A version of this product is available for the PDP–11 computer.

Price: $795 – $8000
Contact: Adrienne H. Webb, Sales Manager
(415) 798–0240
COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

Thoroughbred General Ledger

Operating System: VMS
Keywords: • Data base management • Data dictionary • General ledger • Query facilities

This system provides instant General Ledger account information at the terminal or as a hard-copy printout and can handle 999,999 account numbers. Journal entry editing prevents out-of-balance posting; a Journal Activity Report based on data entry is provided. Adjustment entries eliminate the need for account editing. User-defined financial statements are generated automatically. Income Statements may be produced with either quarter-to-date or year-to-date comparisons.

General Ledger handles general ledger posting and processing on a multiperiod basis, and transactions may be purged monthly or retained for the entire year. Year-to-date and prior-year balance information is provided for each account. The system accommodates up to 26 General Ledger files, providing independent or consolidated financial reporting. A monthly General Ledger Detail Report is provided, a monthly and quarterly Trial Balance generated, and automatic balance sheet produced. The system provides Capital Statement Account reporting, Chart of Accounts reporting with option to print monthly balances, and a Budget Master Report that details budgets for the entire year. The Income Statement design is facilitated with the Format Report. The General Ledger Account Activity Report summarizes all General Ledger transactions, providing the user with an option to review all accounts or a specified range. Automatic audit trails are provided.

A version of this product is available for the PDP–11 computer.

Price: $795 – $8000
Contact: Adrienne H. Webb, Sales Manager
(415) 798–0240
COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

Thoroughbred Payroll

Operating System: VMS
Keywords: • Data base management • Data dictionary • Payroll • Query facilities

This system's Employee Master File can handle up to 999,999 employees and can be sorted by employee number or alphabetically. The Employee Master Report includes deduction information, year-to-date and quarter-to-date information, and employee status; all data entries can be easily corrected. Payroll checks are produced automatically with check numbers, and payroll can be produced weekly, biweekly, semimonthly, and monthly. Payroll processing includes hourly, overtime, doubletime, salaried, holiday, sick, vacation, bonus, and per diem. Both multicompany and departmental pay categories are provided.

Manual and reverse check entry are available, as is automatic restart payroll check processing. Withholding schedules include federal, state, and local taxes; FICA, FUTA, SUTA, unemployment, and workmen's compensation; state tax requirements; nonresident and resident taxation; standard deductions, including medical, life insurance, savings, savings bonds, loan repayment, and garnishment; five miscellaneous deductions by percent, dollar amount, or by hour dollar amount; and flexible miscellaneous deductions. Discretionary withholding tax is provided, as is a nontaxable payroll option. The system automatically provides tax deposit schedules for federal and state taxes withheld and adjustable tax rates. The system accommodates payrate overrides and automatically generates W–2 forms and 941 information.

Payroll can report earned-income credits and has an optional general ledger interface. Flexible filing status for each tax deduction category is provided. The Time Sheet Edit report is generated automatically; the Register summarizes complete payroll data for the current cycle, quarterly, and yearly; and the Labor Distribution report summarizes payroll data by department. Workmen's Compensation reports are generated automatically, and General Ledger distribution reports by department and audit trails are also provided.

A version of this product is available for the PDP–11 computer.

Price: $795 – $8000

Contact: Adrienne H. Webb, Sales Manager
(415) 798–0240
COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

Time Management and Billing

Operating System: VAX DSM, VMS

Keywords: • Billing

This product is written in ANSI standard MUMPS and runs on a wide range of DIGITAL equipment, including micros, minis, and VAXs. This table-driven product provides the recording of work time expended against projects for various clients and multiple-billing rates and produces a worksheet, which allows modification before the automatic creation of invoices.

A version of this product is available for the PDP–11 computer.

Price: $8000 – $50,000
Contact: John W. Bishop
(214) 422–1022
ANTRIM CORP.
101 E. Park Boulevard, Suite 855
Plano, TX 75074

TOLAS–AP (Accounts Payable)

Operating System: VMS
Keywords: • Accounts payable • Billing • Financial analysis • General ledger

TOLAS Accounts Payable controls cash disbursements and related accounting functions in a single- or a multicompany environment. The system operates with automatic vouchering to accumulate information on vendors, vendor invoices, discounts, and expense distributions. Accounts Payable produces prepayment information, writes approved checks, and reports and maintains historical data for detailed analysis. TOLAS Accounts Payable can be installed stand alone or can be interfaced with other TOLAS accounting or distribution modules. The system provides interactive entry functions for vouchers, voucher maintenance, check voiding, and check reconciliation. Cash-requirement reporting can be run for specific banks in user-defined period parameters. Standard accounts payable reports are produced with several sort and selection options for summary or detail reporting. Account distribution information is passed to the general ledger for current financial statements. A special VAX-to-PC interface is available to transfer either raw or processed data from TOLAS files to personal computers for analysis, reporting, or graphing by LOTUS 1,2,3 or other MS–DOS software. TOLAS Accounts Payable is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $8000 – $15,000
Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TOLAS–AR (Accounts Receivable)

Operating System: VMS
Keywords: • Accounts receivable • Billing
• Financial management

This system for single or multiple companies maintains the customer master file, records charge and credit information, and automatically creates general ledger distributions. Receivable items are created either through the Order Entry/Invoicing interface or by entering invoices directly to the Accounts Receivalbe system. Receivables are processed as open items associated with a particular invoice and are maintained on file until reconciled by specific credits or adjustments. Transaction records and offsetting distributions are maintained until they are purged, based on user-controlled criteria. The system transfers receivable amounts among different accounts and open credits. File maintenance builds and maintains a master file of codes for validation during data entry and for the retrieval and display of information for each code. The package computes and assesses finance charges on past-due customer accounts. Standard accounts receivable reports, including the aged trial balance, the receivables ledger, and monthly statements of account, can be produced to show all open-item detail and past and current finance charges. Inquiry and reporting capabilities are also provided. The system interfaces with TOLAS Order Entry/Invoicing and the Financial Reporting/General Ledger modules. TOLAS Accounts Receivable is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $7000 – $24,000
Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TOPAZ Accounts Payable

Operating System: VMS
Keywords: • Accounts payable

Memory required: 1MB. Distribution medium: magnetic tape.

This package gives total control and tracking ability to the accounts payable department and manager. The system features automatic voucher numbering, automatic check production, complete vendor information and history of payments, on-line inquiry and data entry, voucher deferral, cash-requirements inquiry and reporting, outstanding-check reconciliation, aged trial balance reporting, user report writer (optional), three levels of security, and partial and full alpha record retrieval. An additional option is the accounts payable to general ledger distribution.

This package interfaces with the TOPAZ Accounts Receivable, TOPAZ Payroll, TOPAZ General Ledger, and TOPAZ EZ–Mail packages. Available at additional costs are customizing, telephone support, and training. A user's manual is included in the price. Programs are written in BASIC.

The price includes ALSP (Applications-Level Security Package).

Price: $6000
Contact: Sales Department
(201) 884–0892
INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

TOPAZ Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable

Memory required: 1MB. Distribution medium: magnetic tape.

This package gives total control and tracking ability to the accounts receivable department and manager. The system features cash forecasting, held-order inquiry/report, trial balance detailed/summary, cash posting log, customer statements (billing), cash posting (with general ledger posting option), customer invoicing, credit and debit memo processing, accounts receivable amend, and partial and full alpha record retrieval. This package interfaces with the TOPAZ General Ledger, TOPAZ Accounts Payable, TOPAZ Payroll, and TOPAZ EZ–Mail packages. Available at additional costs are customizing, telephone support, and training. A user's manual is included in the price. Programs are written in BASIC.

The price includes ALSP (Applications-Level Security Package).

Price: $6000
Contact: Sales Department
(201) 884–0892
INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

TOPAZ General Accounting System A/R, G/L, A/P

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • General ledger

Memory required: 1MB. Distribution medium: magnetic tape.

This accounting package provides a simple and straightforward method of maintaining your company's accounting records. This package includes stand-alone and three modular components that interface with one another. The system consists of the following modules: TOPAZ General Ledger, TOPAZ Accounts Payable, TOPAZ Accounts Receivable, and ALSP (Applications-Level Security Package). Available at additional costs are customizing, telephone support, and training. A user's manual is included in the price. Programs are written in BASIC.

The price includes ALSP (Applications-Level Security Package).

Price: $13,000
Contact: Sales Department
(201) 884–0892
INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

TOPAZ General Ledger

Operating System: VMS
Keywords: • General ledger

Memory required: 1MB. Distribution medium: magnetic tape.

This package provides a simple and straightforward method of maintaining your company's accounting records. System features include unlimited chart-of-accounts records, recurring journal entries and budgeting facilities, controlled automatic posting of entries from accounts receivables and accounts payable, and consolidated reporting. The package interfaces with the TOPAZ Accounts Payable, TOPAZ Accounts Receivable, TOPAZ Payroll, and TOPAZ EZ–Mail packages. Available at additional costs are customizing, telephone support, and training. A user's manual is included in the price. Programs are written in BASIC.

The price includes ALSP (Applications-Level Security Package).

Price: $5000
Contact: Sales Department
(201) 884–0892
INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

TOPAZ Payroll

Operating System: VMS
Keywords: • Payroll

Memory required: 1MB. Distributed medium: magnetic tape.

This package gives control and tracking ability to the payroll department and manager. The package features payroll data entry, pay check production, withholding tax table maintenance for federal/state/city, employee maintenance, dependent/deduction maintenace, pay rate tables maintenance, and quarterly and year-to-date maintenance. Reports include data entry verification lists, payroll journals, tax liability registers, attendence registers, deductions registers, quarterly reports, employee earnings to date, and W–2 and tax statement forms. The package stands alone or can be integrated with the TOPAZ General Ledger package. The package also interfaces with the TOPAZ General Accounting System, TOPAZ Accounts Payable, TOPAZ Accounts Receivable, and TOPAZ EZ–Mail packages. Available at additional costs are customizing, telephone support, and training. A user's manual is included in the price. Programs are written in BASIC.

Price: Available upon request
Contact: Sales Department
(201) 884–0892
INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

TOPAZ Purchasing Package

Operating System: VMS
Keywords: • Purchasing

Memory required: 1MB.

This package allows the purchasing department to control product purchasing. A data base stores the names of vendors and products sold by each vendor. The vendor file facilitates the entry of purchase orders, including freight and payment terms. Dollar volume by vendor is tracked over a 2-year period. The product vendor file links a product with its one or more vendors. This file contains vendor-specific information, including weight, unit of measure, pricing, and product notes.

The purchase order entry feature allows the purchasing department to identify the vendor; enter freight method, shipping location, and payment terms; and confirm purchase order, delivery date, and other information. Detail line information uses preestablished data from the product/vendor file to facilitate entry. Nonstandard product entry is permitted, with free-form text entry in the purchase order file. Pricing is calculated automatically but can be overridden.

Blanket purchase orders can be entered and released until the blanket order has been satisfied. A purchase order summary feature provides a review of system-generated purchase orders from most recent to oldest. This summary can cover the whole company or a specific vendor.

A product purchase inquiry feature provides a review of purchases of a product for all vendors or one vendor. Information includes quantity ordered, price for each unit, delivery date, and quantity received.

Other files include the pricing review, an expected price change report, outstanding purchase orders, historical product purchases, and vendor listings. This package is written in VAX BASIC and VAX FMS.

Price: $5500
Contact: Sales Department
(201) 884–0892
INTEGRATED SYSTEMS, INC.
170 Algonquin Parkway, P.O. Box D
Whippany, NJ 07981

TRON Accounts Payable

Operating System: ULTRIX–32
Keywords: • Accounts payable • Data base management
Distribution media: RL02, RX50.

TRON Accounts Payable and Cash Disbursements is used either as a stand-alone package or with TRON General Ledger. The package features debiting and crediting to any part of the general ledger and also allows easy customization when used with our user-friendly data base manager.

As a stand-alone package, TRON AP can produce edit lists and journals for entry, editing, and posting of new payables; adjustments; cancellations; and prepayments. TRON AP prints open items, has an on-line vendor account inquiry, prints cash requirements, and has flexible payment selections, including partial payments. Vendor analysis is also a standard feature of this system.

Training is available to learn the customization process.

A version of this product is available for the PDP–11 computer.

Price: $800 – $2000
Contact: Michael A. Sce, President
(718) 377–6998
SOFTWARE CONSULTING ENTERPRISES, INC.
1360 Ocean Parkway, Apt. 3H
Brooklyn, NY 11230

TRON Accounts Receivable

Operating System: ULTRIX–32
Keywords: • Accounts receivable • Data base management • General ledger

Distribution media: RL02, RX50.

TRON Accounts Receivable, which may be used with TRON General Ledger, efficiently performs debit and credit functions to any part of the TRON General Ledger. The package's user-friendly data base manager facilitates programming changes.

TRON Accounts Receivable includes open item and balance forward; maintenance lists; reports and statements; cash receipt entry, editing, and posting on-line customer inquiry; sales commissions; and printed reports.

Training is available to learn the customization process.

A version of this product is available for the PDP–11 computer.

Price: $800 – $2000
Contact: Michael A. Sce, President
(718) 377–6998
SOFTWARE CONSULTING ENTERPRISES, INC.
1360 Ocean Parkway, Apt. 3H
Brooklyn, NY 11230

TRON General Ledger

Operating System: ULTRIX–32
Keywords: • Data base management • General ledger

Distribution media: RL02, RX50.

TRON General Ledger, which may be used with TRON Accounts Payable or Accounts Receivable, includes all standard reporting features associated with a general ledger system, as well as the added feature of easy customization. The package's user-friendly data base manager makes programming easy.

Standard formats are included for chart of accounts, worksheets, balance sheets, and net income statements. Capabilities include reviewing last year's information as well as historical records of net income statements for up to five years. Random inquiries and reports are easily accessed by a menu of user-defined selections.

Training is available to learn the customization process.

A version of this product is available for the PDP–11 computer.

Price: $800 – $2000
Contact: Michael A. Sce, President
(718) 377–6998
SOFTWARE CONSULTING ENTERPRISES, INC.
1360 Ocean Parkway, Apt. 3H
Brooklyn, NY 11230

Turnkey Data

Operating System: VMS
Keywords: • Accounts payable • Accounts receivable • Payroll • Sales analysis

This turnkey/data base business package for DIGITAL OEMs/distributors/end users includes all necessary programs, procedures, and start-up indirect command files to generate, run, and track a DIGITAL OEM or distributorship. The programs are written in DIBOL–11 and DECFORM and include job costing, payroll, accounts receivable, accounts payable, and general ledger.

This package enables the holder to offer clients turnkey software without leaving the office. Report programs allow the display of report information on terminal screens with 132-character display capability.

A version of this product is available for the PDP–11 computer.

Price: $1200 – $8400
Contact: Peter J. Marcantonio
(518) 793–8023
EXECUDATA COMPUTER SYSTEMS
1392 Redmond Road
Gansevoort, NY 12831

UDS Accounts Payable

Operating System: VMS
Keywords: • Accounts payable

This series of programs helps manage outgoing cash. When used with other modules, Accounts Payable will update general ledger, vendor, and job cost records as accounts receivable transactions are made. The Accounts Payable module also links to the vendor master module to provide control over the accounts payable function.

Invoices are entered with payment dates, discounts, and general ledger account numbers. A check of existing files before permitting entries prevents duplicate invoice entries. Trial balances feature invoices detailed by vendor. Invoice amounts are listed in columns according to age (current, 30, 60, 90, and 120 days old). Cash requirements look in the other direction in terms of invoices due in 10, 20, or 30 days. Invoices can be keyed for payment by individual invoice, vendor, age, or discount. Invoices may be paid automatically or confirmed individually by the operator. Invoices may be paid in full, in part, or marked as prepaid (if a manual check was issued). A historical file of paid invoices may be accessed on the CRT or in hard-copy form. Open invoices from the vendor, with aging data, may be displayed on the CRT.

Printing features include printing registers of entries in entry- and in ledger-account sequences. Another check register prints a record of items marked for payment and items entered or flagged as prepaid. Voucher-type checks with details can also be printed.

The vendor master module gives you instant access to your company's list of vendors and provides separate purchase order and payment addresses, contact names, each vendor's terms, a flag on whether a 1099 is required, number and value of purchase orders, open payables balance, plus number and value of purchase orders for the current and past years. The vendor master module also provides a listing of vendors requiring a 1099 and the amounts of payments made to them during the year.

A version of this product is available for the PDP–11 computer.

Price: $750 – $3000
Contact: Zane R. Oaks, Marketing Manager
(513) 890–1800
PROJECTS UNLIMITED, INC.
P.O. Box 14538
Dayton, OH 45414

UDS Accounts Receivable

Operating System: VMS
Keywords: • Accounts receivable

Minimizing accounts receivable age can directly affect profitability. Accounts Receivable facilitates your achieving this goal. The system provides a hard-copy printout of account aging by customer, which includes customer order number, age of invoice in days, and historical average customer payment time. The CRT version includes age and purchase order of each invoice. The system also features cash-flow projection, using average payment time, to calculate in detail or by customer the cash to be received in 10, 20, or 30 days, as well as past dues and unknowns. Cash discounts and credits may be posted in part or in full, followed by a batch report. Credits may be updated and generated. A list of customers on credit hold (45 days or more) may be produced for the order department. The system also prints statements and dunning letters, tailored to 60 and 90 days, on demand.

If used with order processing, the system will be automatically updated by invoicing. When used with the other modules, Accounts Receivable will automatically update general ledger, sales records, and sales commissions files as transactions are made.

A version of this product is available for the PDP–11 computer.

Price: $750 – $3000
Contact: Zane R. Oaks, Marketing Manager
(513) 890–1800
PROJECTS UNLIMITED, INC.
P.O. Box 14538
Dayton, OH 45414

UDS General Ledger

Operating System: VMS
Keywords: • General ledger

The complex job of period and year-end reporting is simplified with the General Ledger software module. The programs provide accurate accumulation, by individual profit centers, of your company's financial information. Some of the system's highlights are:

- Hard-copy audit trails provided as a permanent record
- Manual or automatic journal entries by programs for invoicing, payroll, accounts payable, and others, with input journal printed prior to journal updating
- Printing of a report of items in the journal before the ledgers are updated, giving a batch total as well as detail
- A month-end journal by general ledger number report that details each entry to each ledger account
- A trial balance, balance sheet, income and expense report, and profit and loss statement by subsidiary company or profit center as well as a consolidated format produced
- Duplicates of those reports with projected budgetary figures, allowing you to plan your business for the coming year and to answer hypothetical budgetary questions
- Printing of budget or actual report by company and/or by department

A version of this product is available for the PDP–11 computer.

Price: $1000 – $3500
Contact: Zane R. Oaks, Marketing Manager
(513) 890–1800
PROJECTS UNLIMITED, INC.
P.O. Box 14538
Dayton, OH 45414

UDS Payroll

Operating System: VMS
Keywords: • Employment • Payroll • Personnel

This module expedites the routine, multifaceted job of payroll accounting. The system's features include:

- Performance of all payroll functions after initial entry of attendance records either directly or through labor ticket input
- Maintenance of an employee file containing names, addresses, rates, exemptions, totals of eight deductions, and vacations
- Initiation of payroll process with attendance entry and printout of attendance register
- Calculation of complete payroll, followed by printing of registers for payroll, deductions, vacations, paychecks, and departmental distribution
- Check printing and employee file updating

- Quarterly and year-end reports — printout of 941–As, W–2s, and reports for city tax, state tax, semiannual workers compensation, and quarterly employee payroll summary
- Inclusion of many personnel-related functions
- Employee seniority, birthday, vacation status, sick-leave status, and payroll and personnel data reports
- Employee performance review schedule showing employee reviews as scheduled for any designated month
- Alphabetical employee list of names and addresses

As a single, comprehensive source for essential payroll information, the Payroll module offers a tremendous speed advantage over manual payroll processing.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $4500
Contact: Zane R. Oaks, Marketing Manager
(513) 890–1800
PROJECTS UNLIMITED, INC.
P.O. Box 14538
Dayton, OH 45414

UDS Purchasing Management

Operating System: VMS
Keywords: • Distribution • Inventory • Manufacturing • Purchasing

This series of programs manages purchase orders from the time they are placed until all items have been completed. The system's features include:

- A purchase order entry sequence that directs the entry of the order, checks vendor terms and, if used with parts master and work-in-process modules, updates the WIP and either raw-material parts records or finished-goods items with quantity ordered, purchase order number, and price
- Printing of an order entry log and the required purchase orders, which note whether the orders are confirming a previous purchase order, so as to eliminate double shipments
- Printing of an order that is on the books or displayed by vendor
- Delivery exception, status by purchase order, completed purchase order, and open purchase order reports
- Flagging of an order received and each item as partial or complete
- Updating of work-in-process and parts master, if used with quantity received and quantity still on order
- Updating of vendor records with open purchase order balance, purchase order balance for year to date, number of open purchase orders, and number of purchase orders for year to date
- A part-search program that scans the purchase order file for outstanding orders containing a given part number

- Purchase order follow-up for late deliveries, which includes a letter asking when the order will be shipped
- A cash-flow projection based on delivery of scheduled material, as well as invoice due date, plus 30 days

The Purchasing Management module is directly linked to the vendor master module, providing another source on which to base purchasing decisions.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $4500

Contact: Zane R. Oaks, Marketing Manager
(513) 890–1800
PROJECTS UNLIMITED, INC.
P.O. Box 14538
Dayton, OH 45414

ZIN

Operating System: ULTRIX–32, UNIX* (Berkeley)

Keywords: • Data base management • Financial management • General ledger • Spreadsheets

ZIN is a relational data base system with built-in applications. The system consists of seven standard modules — General Ledger, Accounts Payable, Accounts Receivable, Payroll, Statistical Analysis, Spreadsheet, and Fixed Assets.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $300 – $3000

Contact: Dennis R. Thompson
(619) 283–6211
EPICOM INC.
3647 Fairmount Avenue
San Diego, CA 92105

Agriculture

Barbara Alper/Stock, Boston

ADAM (Automated Dairy and Management)

Operating System: VMS
Keywords: • Management • Production control • Property management

This fully integrated dairy herd management system is designed to meet the current and future record-keeping needs of dairy herd managers. Developed and maintained by a staff of dairy herd management experts, ADAM maintains complete records on herd health, reproduction, and production. ADAM, available for on-farm computers or interactive timesharing on remote computers, interfaces with any manufacturer's automatic data-collection devices. This system can be interfaced with automatic milk meters and feed stalls and all the other devices being developed and announced (milk conductivity, milk or body temperature, animal activity, body weight, and so on).

ADAM interfaces electronically with Dairy Record Processing centers to allow direct input of management information and distribution of DHI results. Sire production and type proofs can be automatically updated after each USDA Sire Summary. Management reports can be customized by the user; up to 10 versions of each report may be permanently defined and generated by request. Herd summary information for the last 13 months and 2 previous years allows within-herd analysis of herd health, reproduction, production, cost, and genetic trends. ADAM has special provisions to support the special processing needs of registered breeders — complete embryo transfer, classification, registration, and pedigree capabilities are provided. Table-driven prompts and comments allow the system to be converted from one language to another in a relatively short period of time.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Roger W. Palmer, Ph.D., President
(608) 233–6484 or 231–2005
AGRICULTURAL COMPUTING AND CONSULTING
215 Lathrop Street
Madison, WI 53705

DAIRY–MAN Dairy Herd Management System

Operating System: VMS
Keywords: • Data collection • Distribution • Management • Report writer

DAIRY–MAN, developed by Shovav, is a comprehensive, powerful system for dairy farmers, veterinarians, feeding experts, and computer professionals and is the ideal dairy herd management tool. DAIRY–MAN provides better information and thus higher profits, data to raise milk production and reduce disease, on-line analysis of any aspect of herd or an individual's history, and user-defined reports offering flexibility, selectivity, and format.

Input consists of individual animal information, such as calving, birth, health, fertility, milk quantity, changes in weight, fattening, breeding, and group exit; group information, such as feed use and real milk production; branch information, such as real milk production, manure and fertilizer production, and products and services; and herd information, such as feed stocks, products, and services. Output contains working reports, such as doctor's visit, forecasting of estruations, lists of cows/calves for insemination, estimation of period without milk and calving, group's composition and characteristics, and animal cards; and periodical and professional reports, such as herd movement, herd composition, fertility checks, milk control totals, milk-quantity diagrams, professional data, miscellaneous estimations, feed administration, milk production and distribution, meat production and distribution, feed stock control, monthly reports, and annual reports.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bezalel Cnaani
(972) 52–554267
EXOFT — SOFTWARE SYSTEMS EXPORT LTD.
P.O. Box 317
Herzliya 46103
Israel

FEED–MAN Feed Analyzer

Operating System: VMS
Keywords: • Cost accounting • Statistics

This system, developed by Shovav, matches information from the ration preparation system and the DAIRY–MAN system to analyze feeding efficiency, to check ratio of production/feeding, and to improve the dairy's efficiency. The Feed Analyzer reports include actual feeding for a group, total usage of every nutrient, average contribution percentage for any ingredient to the dry material in the ration, cost analysis, group feeding analysis by ingredient (constraints), feed-efficiency coefficients, a comprehensive herd report, and milk yields — total figures for period.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bezalel Cnaani
(972) 52–554267
EXOFT — SOFTWARE SYSTEMS EXPORT LTD.
P.O. Box 317
Herzliya 46103
Israel

FEED–MAN Ration Preparation

Operating System: VMS
Keywords: • Calculation aids • Medical • Production control

FEED–MAN, developed by Shovav and used by farmers, feedmill operators, and veterinarians, offers a ration-preparation module that composes food mixtures based on linear programming formulas. The user can forecast changes in ration composition according to fluctuations in price or quantity.

This flexible system allows for repeated composition planning, taking into consideration the various constraints of required protein value, nutritional value, energy requirements by number of calories, and so on. The system generates a nutritional breakdown summarizing protein, calcium, magnesium, carbohydrates, and phosphorous values, as well as calories for each feed mixture.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bezalel Cnaani
(972) 52–554267
EXOFT — SOFTWARE SYSTEMS EXPORT LTD.
P.O. BOX 317
Herzliya 46103
Israel

Format International Feed Formulation Systems

Operating System: VMS
Keywords: • Bill of materials • Manufacturing
• Materials handling

This integrated mill management package for the animal feed manufacturer enables the feed compounder to formulate feeds and helps minimize the costs associated with buying and mixing raw materials. Single-Mix is used to formulate feeds, concentrates, and premixes and provides up to 10,000 formulations with 200 analyses or 10,000 raw materials with 12 costs. Formulations may be run one after another. Gross-margin reports, raw-material breakdowns, straightforward stock monitoring, and batch control are included in Single-Mix.

Single-Mix links with more than 30 programs, such as Multi-Mix formulation system, SBREAK (Single-Mix) Parametrics, TBREAK (Tonnage) Parametrics, and other programs to satisfy the nutritionist, the buyer, the mill manager, and the managing director. The software may also be linked into administration and process control programs.

In the United Kingdom, contact Edwin Jones, Format International Ltd. Owen House, Heathside Crescent, Woking, Surrey. Telex 859216 FORMAT G. Telephone: (04862) 26081/2.

In the Far East, contact Mark Fong, Format International Software, Hong Kong Trade Center, 1702 Des Voux Road, number 161 Hong Kong Central, Hong Kong. Telex 62855 Tiki HX. Telephone 5440691.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Wallace Bees
(515) 276–4827 or Telex: 478375
FORMAT PHARM–TECH LTD.
10201 Dennis Drive
Des Moines, IA 50322

Integrated Feed Mill Control System and Technical Livestock Programs

Operating System: VMS
Keywords: • Biology • Process control • Scheduling

These programs provide feed formulation systems (linear optimization) and laboratory programs for animal feed; livestock programs for dairy, pig, and poultry farms; integrated solutions to economic, biological, stock, and scheduling problems for all farms and feedmills; administration programs, such as sales order processing, purchase orders, and accounting; process control; and transport optimization.

In Europe, contact Roland Zanotelli (telephone 061 42 72 79 or Telex 63103), Format Agro-Computer AG, Grellingerstrasse 9, Postfach 235, 4020 Basel, Switzerland.

A version of this product is available for the PDP–11 computer.

Price: $500 – $50,000
Contact: Bill Harrell
(912) 246–3396
AG FORMAT
P.O. Box 1866
Bainbridge, GA 31717

WATER–MAN HNA (Hydraulic Network Analyzer)

Operating System: VMS
Keywords: • Environmental • Scheduling • Simulation

HNA, developed by Shovav, is a simulation program that lets the user test various modes of operation without wasting time, energy, or water. HNA lets the user display the relevant data: flows, pressures, energy consumption, and so on.

The irrigation scheduling system accepts the crops plan for the coming year and uses a data base that includes the water requirements for each crop in each season of the year, taking into consideration the lot size, the constraints of irrigation equipment, water resources, and rate of supply (flow). The system plans and schedules irrigation according to this input. Input is entered and validated on line.

The interactive irrigation scheduling system can be periodically updated after the results of wetness measurements in the fields and the effective level of evaporization have been entered. The system can be combined with the HNA, providing efficient use of network resources for cost-effective results.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Bezalel Cnaani
(972) 52–554267
EXOFT — SOFTWARE SYSTEMS EXPORT LTD.
P.O. Box 317
Herzliya 46103
Israel

Arts

Dan Budnik/Woodfin Camp Associates

Arts

Operating System: VMS
Keywords: • Accounts payable • General ledger • Mailing lists • Word processing

This integrated management system for nonprofit organizations is particularly suited for the arts. The modules include fundraising, membership, subscription and single-ticket sales, collection management (art object inventory), marketing questionnaire analysis, general ledger and financial reporting, accounts payable, purchase order system with commitments reporting, payroll, fixed-asset accounting, and budgeting.

The software, written in BASIC, requires 2MB to 4MB a module for disk storage of the programs. All programs require less than 32K main memory to run.

The systems have flexible report writers allowing the user to design forms, letters, and reports and to implement them easily. All programs are table driven. FSORT/SELECT is used for extremely fast sort and selection response times.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $20,000
Contact: Robert W. Hunt
(206) 328–3100
ROBERT W. HUNT & ASSOCIATES
1502 Lake Washington Boulevard South
Seattle, WA 98144

LEONARDO

Operating System: VMS
Keywords: • Accounting • Data base management • Forms management • Inventory

LEONARDO is a turnkey fine art inventory management system with multiuser capabilities. Designed for art galleries, art dealers, and museums, LEONARDO serves businesses that handle large inventories of unique items. The system includes a complete forms driver data base system that is customized to the specifications of the purchaser. The system maintains inventory, invoice, accounting, and client files. File configuration allows multiattribute retrieval. For example, clients may be retrieved by name, address, artist interests, recent contacts, and/or recent sales to target potential customers for specific works of art.

Files may be fully cross-linked — for example, inventory items listed by purchaser, clients listed by all purchasers. Inventory and client files can also be integrated with ledger files, so that single operations can update all related items in client, inventory, and ledger files.

Accounting, which conforms to FSAB standards, includes accounts receivable and payable, profit/loss, and trial balance. Word processing with mail merge capabilities is included.

The system supports fully protected, concurrent access to all files, with dynamic incremental backup on floppy disk.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $15,000

Contact: Margaret Jensen, President
(804) 971–7987
ALBEMARLE FINE ART RETRIEVAL GUILD, INC.
P.O. Box 3116
Charlottesville, VA 22903

Communications

Robert Pyle

2780/3780 Protocol Emulator

Operating System: MicroVMS, VMS
Keywords: • File transfer • Operations • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

The VAX 2780/3780 Protocol Emulator (PE) emulates the synchronous line protocol used by a 2780 or a 3780 Remote Batch Terminal. The emulator enables the VAX/VMS user to transfer data between the VAX/VMS and MicroVMS operating systems and another system equipped to handle 2780 or 3780 communications protocols.

The emulator can be invoked interactively or by a command procedure. The emulator's command set facilitates communication line sharing among several users. With the appropriate modem options, the emulator can automatically answer incoming calls.

Sophisticated operations can be performed by a combination of command procedures, allowing, for example, unattended operation. That would include the capability of detecting an incoming call, establishing the connection, and then transmitting and receiving files and recovering from transmission failures, all without operator intervention.

Several data formats are supported with the use of a particular format selected by user command. Users can select various forms control translation schemes, variable-length records or card images, ASCII/EBCDIC translation, and BSC transparency. All file I/O is performed through the VAX/VMS record management facility. Print and punch stream recognition is implemented so that the data-manipulation scheme can differ with each stream.

The product can concurrently run up to four physical lines, each with a different set of attributes — some can be 2780, the others 3780 — at speeds between 1200 and 9600 bps a line.

Refer to SPD #25.07.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $924 – $4620
Contact: Consult your local DIGITAL sales office (see Introduction).

3271 Protocol Emulator

Operating System: MicroVMS, VMS
Keywords: • Networking • Programming tools • Simulation

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

The VAX 3271 Protocol Emulator (PE) enables VAX/VMS or MicroVMS VT100 terminals and application programs to interact with IBM system application programs and system services that use the Binary Synchronous Communications (BSC) line discipline.

The 3270 Terminal Emulator utility allows the VT100 user on a VAX/VMS system to access an IBM system, a useful feature for users who are implementing distributed processing with VAX systems. Users who are moving applications from centralized mainframes to VAX/VMS distributed processors will find this capability an efficient migration tool during the transition phase. Users who occasionally access applications that remain on mainframes can access those applications through their local VAX systems.

The application program interface provides a base for distributed applications in which one component of the application runs in an IBM host system and the other component in a VAX. That type of application is useful in situations such as on-line access and update of a mainframe data base in response to an event in the VAX or when it is inappropriate to present a 3270-style formatted screen to a user who is accustomed to VAX-style screens.

Refer to SPD #25.21.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1125 – $5500
Contact: Consult your local DIGITAL sales office (see Introduction).

3780 COMBOARD™

Operating System: VMS
Keywords: • Device drivers/handlers • Pre- and postprocessors • Simulation

COMBOARD, a front-end data communications processor that plugs into the PDP–11 UNIBUS, is a hex-height module utilizing a 16-bit microprocessor. Software is 3780 protocol and has interfacing utilities for RSTS/E, RSX–11M/M+, and VMS. A device driver is also included. A 3780 protocol emulator runs directly on the COMBOARD, and all other I/O software runs in the DIGITAL host. The price includes source code for all software except the emulator. Quantity discounts are available.

A version of this product is available for the PDP–11 computer.

Price: $9800 – $21,900
Contact: Bill Martin
(800) 772–3282
SOFTWARE RESULTS CORP.
2887 Silver Drive
Columbus, OH 43211–1081

ACCES Network Virtual Terminal Service

Operating System: ULTRIX–32, VMS
Keywords: • Networking • Telecommunications

This network virtual terminal service for heterogeneous systems supports multiple, concurrent, and logical sessions established with DIGITAL and other hosts connected to local and internetworks. A Courier presentation-layer protocol interface is required, available through ACC's ACCES Network Protocol Package.

Price is for binary; source is available.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: ACC
(805) 963–9431
ACC
720 Santa Barbara Street
Santa Barbara, CA 93101

ACCES NPP (Network Protocol Package)

Operating System: ULTRIX–32, VMS
Keywords: • File transfer • Networking • Telecommunications

NPP implements industry-standard protocols that correspond to the Open System Interconnection (OSI) Reference Model layers 3, 4, 5, and 6, with an emphasis on distributed processing features and functions in a multivendor, multi–operating system environment. The ACCES NPP provides a communication path between user applications or network utilities and the device driver of most commercially available network controllers for such networks as Ethernet X.25 and HDLC-based broadband networks.

Two implementation options are available: TCP/IP, with the Courier protocol at the presentation layer, or the full XNS protocols, including Courier, SPP, IDP, and Error.

The key feature of ACCES NPP is the full implementation of the Courier protocol, which is designed for distributed processing environments. An applications programmer need not be concerned with network configurations, routing, flow control, or packetization but instead can view the network as a pool of resources that are manipulated with simple remote procedure calls. ACCES NPP also offers system programmers and designers a highly structured programming environment in which lower levels of network operation can be accessed. Network management functions are provided as a part of the standard package.

This package is useful to network design engineers responsible for the network and communication architecture of product lines or to system managers responsible for interconnecting processing resources.

The ACCES Network File Management Service and the ACCES Network Virtual Terminal Service are two network utilities available for use with the ACCES Network Protocol Package.

Sources are available.

A version of this product is available for the PDP–11 computer.

Price: $2500

Contact: ACC
(805) 963–9431
ACC
720 Santa Barbara Street
Santa Barbara, CA 93101

ACCULINK™

Operating System: VMS

Keywords: • Asynchronous communication • Diagnostics • File transfer

ACCULINK is a software module that permits error-free file transfer between the PDP–11 or VAX and a microcomputer running the ACCULINK–Micro product. The product is written in MACRO VAX or PDP–11 assembler language and uses standard operating system conventions. Both ASCII and binary files may be transferred error free. CRC–16 is the method of error detection, with automatic retransmission on error.

A version of this product is available for the PDP–11 computer.

Price: $995 – $1475

Contact: Janine Filion
(603) 659–5891
IE SYSTEMS INC.
P.O. Box 359
Newmarket, NH 03857

Advisor

Operating System: VMS

Keywords: • Debugging • Diagnostics • Software utilities

Advisor, written in BLISS, is an option for the Observer utility from PBS. After program installation, a sufficiently privileged user issues the ADVISE command and the name of the target terminal. The advising terminal is placed in observe mode, with or without the target's knowledge. All characters displayed at the target terminal are also shown at the advising terminal. Any characters typed at the advising terminal are interpreted by VMS as if they were typed at the target terminal. To break the connection, an interrupt character is typed by the advisor. Photo log files can be supplied as input to Advisor, allowing reexecution of terminal sessions.

Price: $495

Contact: Arthur Cacossa
(212) 425–0200
PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

ALL–IN–1 Voice Messaging Support

Operating System: VMS
Keywords: • ALL–IN–1 • Electronic mail • Office systems • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This product provides an interface between the ALL–IN–1 mail user and the voice store-and-forward system known as VOICEMAIL,® which allows users to send voice messages to other users of the VOICEMAIL system, reply to messages they have received, delete and save messages, and so on. Access to the system is made from a telephone equipped for tone dialing (AT&T's Touch-Tone or equivalent), and commands are entered by using the telephone keys.

The VOICEMAIL system notifies the ALL–IN–1 Voice Messaging Support product running over a local high-speed link of the arrival of voice messages. The Voice Messaging Support software passes those notifications to the ALL–IN–1 user as items of electronic mail. The notifications include information provided by the VOICEMAIL system to identify the sender of the voice message, the date and time of recording, and the length, in seconds, of the message. Notification can also be sent over a DECnet network to any remote user addressable by Message Router.

Refer to SPD #26.44.xx when requesting further information on this product from your local DIGITAL sales office.

VOICEMAIL® is a registered service mark of Voicemail International, Inc.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

Any Databridge

Operating System: None required
Keywords: • Data conversion • File transfer • Telecommunications

This software is a program solution for the exchange of data between incompatible application programs, regardless of hardware. Any enables you to use information from any computer in any of your application programs without data conversion, reformatting, or rekeying. Thus, you can easily move data from outdated computer resources to new, sophisticated ones; exchange data with any mini, micro, or mainframe; consolidate data from multiple sources to one central source; and manipulate and analyze data retrieved from other applications. Any resides on a completely independent system; therefore, no alteration of your present system is required. Any is completely end-user configurable and provides multiuser capability.

Any exists in two product forms:

- Any Databridge — Any is on a computer resource at your facility.
- Any Master Network — Access to Any is through Tymnet, Telenet, or dial-up telephone.

The Any interface card supports access to the products above from your PC.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $60,000
Contact: Loree Fahy
(213) 387–5371
CIPHERLINK CORP.
3807 Wilshire Boulevard, Suite 820
Los Angeles, CA 90010

Any Master Network

Operating System: None required
Keywords: • Data conversion • File transfer • Telecommunications

This software is a program solution for the exchange of data between incompatible application programs, regardless of hardware. Any enables you to use information from any computer in any of your application programs without data conversion, reformatting, or rekeying. Thus, you can easily move data from outdated computer resources to new, sophisticated ones; exchange data with any mini, micro, or mainframe; consolidate data from multiple sources to one central source; and manipulate and analyze data retrieved from other applications. Any resides on a completely independent system; therefore, no alteration of your present system is required. Any is completely end-user configurable and provides multiuser capability.

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A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Loree Fahy
(213) 387–5371
CIPHERLINK CORP.
3807 Wilshire Boulevard, Suite 820
Los Angeles, CA 90010

Autokon Scanner Driver

Operating System: VMS
Keywords: • Device drivers/handlers • Printing

This package provides an interface between ECRM's 8200 or 8400 Autokon laser scanners and a VAX/VMS system. Sample programs enable the user to demonstrate the driver's function. Since they allow the user to accept scanned data from the Autokon and to store it on either disk or magnetic tape, no further interface programming is usually required. This package transfers the power and advantages of the Autokon equipment to the installed base of VAX for typesetting or other applications. Since the package is self-installing and self-documenting, the user does not need any special system knowledge.

Price: $3000
Contact: John W. Kramer, Jr.
(818) 908–0404
TCI
7120 Hayvenhurst Avenue, Suite 410
Van Nuys, CA 91406

BLAST™ (Blocked Asynchronous Transmission)

Operating System: MicroVMS, ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Asynchronous communication • File transfer • Networking • Telecommunications

BLAST file-transfer software links computers at 300 to 19,200 baud by means of standard dial-up phones and networks, or direct-connect. No extra interfaces or boards are required, only standard RS–232 serial ports and any asynchronous modems. BLAST provides easy-to-use, error-free data transfer (binary or text) using an SDLC-like full-duplex protocol for high efficiency and reliability on noisy phone lines, satellite links, packet-switched networks, X.25, and local area networks.

Any computer with BLAST can talk to any other computer with BLAST. BLAST will convert text files to the format of the receiving computer. BLAST includes terminal emulation and text up-load/down-load in addition to error-free file transfer. BLAST is available for more than 100 computers, 23 operating systems from most major vendors, including most popular mainframes and mini- and microcomputers. BLAST provides total compatibility of text or binary files among dissimilar operating systems and transfers data error free from computer to computer, even across operating systems.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $250 – $2495
Contact: Polly Henderson
(504) 923–0888
COMMUNICATIONS RESEARCH GROUP
8939 Jefferson Highway
Baton Rouge, LA 70809

BRDCST: REPLY/ALL Messages Sent to Bottom of Screen

Operating System: VMS
Keywords: • Electronic mail • Operations • Software utilities
Distribution medium: magnetic tape.

This utility is used to send REPLY/BELL messages to the last line of the screen. The program is useful for preserving the screen and even more useful if set up as a foreign command.

Documentation is on magnetic media. DECUS number VAX–53.

Restrictions: The program only simulates REPLY/ALL/BELL. Messages must be 80 characters or less.
Price: $5 – $225
Contact: DECUS (see Introduction)

BSC/DV (Binary Synchronous Communications Support)

Operating System: VMS
Keywords: • Device drivers/handlers
Distribution medium: 800/1600 bpi magnetic tape.

BSC/DV is a driver for the DIGITAL DV–11, a 16-line multiplexer. The driver is sufficiently general to handle most BSC-based protocols and is suitable for transparent and nontransparent transmission, point-to-point and multidrop disciplines, 4-wire and 2-wire half-duplex lines, CRC–16 and LRC block checks, and line speeds up to 9600 bps.

A version of this product is available for the PDP–11 computer.
Price: $5000 – $7500
Contact: Martha Scott
(617) 861–0670
EVANS GRIFFITHS & HART, INC.
55 Waltham Street
Lexington, MA 02173

BSO/Com–2

Operating System: VMS
Keywords: • Asynchronous communication • File transfer
Memory required: 100KB.

This high-speed asynchronous, bidirectional communications facility permits error-free transfer of ASCII and binary files between VAX computers and the Intel Intellec Model 800, Series II and III development systems, and the Motorola EXORciser. The multiuser system transmits binary files (Intel only) and ASCII files for maximum utility. A standard VMS help file for all command switches is included.

Price: Available upon request
Contact: Sales Department
(617) 894–7800
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BSO/TekId (Tektronix Emulator Loading Program)

Operating System: ULTRIX–32, VMS
Keywords: • Microprocessor development • Programming tools

This program interfaces a VAX or a PDP–11 to a Tektronix 8001, 8002, 8540, 8550, or 8560/61 Microprocessor Development Lab. The program permits transmission of microprocessor object programs in either direction between the two machines. TekId also performs error checking and transmission timing and handshaking.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800 or TWX: (710) 324–0760
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BT–II Voice Response Peripheral

Operating System: VMS
Keywords: • Data collection • Signal processing
• Telecommunications

BT–II allows an authorized individual to use any pushbutton telephone to interact with any application program running on a PDP–11 system. The procedure is as follows:

- Pick up the phone.
- Dial a number.
- Input data by pressing the pushbuttons on the telephone. You will receive instructions, verification, and answers in a natural-sounding human voice.

BT–II connects on one end to your company's telephone system. On the other end it plugs into a standard terminal port on your DIGITAL computer. The BT–II is an FCC-approved, stand-alone unit supporting multiple telephone lines simultaneously with instant voice response. Call (617) 821–0326 for a demonstration.

A version of this product is available for the PDP–11 computer.

Price: $16,610 +

Contact: Douglas Keelan, Marketing
(617) 821–0320
PERCEPTION TECHNOLOGY CORP.
50 Shawmut Road
Canton, MA 02021

BTS (Bisynchronous Terminal Support)

Operating System: VMS

Keywords: • Device drivers/handlers • File transfer • Forms management

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

VAX BTS enables block-mode synchronous terminals using the IBM Binary Synchronous Communications (BSC) 3271 protocol to connect to a VAX/VMS system. Specifically, VAX BTS supports the use of an IBM 3274–xC cluster controller with IBM 3278 terminals. Other block-mode synchronous terminals and printers (such as IBM 3271–2/3277, Teletype Dataspeed 4541–1, and Teletype Model 40 printer) are also supported if their features are identical to the IBM 3274–xC/3278. Badge readers and light pens are not supported.

VAX BTS addresses three complementary environments: command mode, screen management, and passthrough mode. In the command mode, the BTS terminal resembles a hard-copy device to VAX/VMS. In that mode, the user can develop applications using VAX/VMS, VAX/VMS tools, and any VAX/VMS layered applications that can communicate with a hard-copy terminal. The user can also execute those applications from the BTS terminal.

The screen management environment allows BTS terminals to interact with the FMS Forms Driver. Forms can be created and modified with the FMS editing facility from a VT100/200–series terminal for use on the BTS terminal, provided the specific considerations for the BTS terminal are followed. A form can also be defined on the BTS terminal as a source form description with the Forms language and then converted to a form data structure, using the Form Language Translator. Within the unique terminal constraints, VT100/200s and BTS terminals can share the same form descriptions as desired.

The passthrough mode allows the BTS terminal user to establish a connection to an IBM host computer through the VAX 3271 Protocol Emulator. In that mode, the BTS terminal is effectively connected directly to the IBM host system, and the VAX/VMS system is transparent to the terminal user and the IBM host.

Refer to SPD #26.08.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1500
Contact: Consult your local DIGITAL sales office (see Introduction).

BURCOM–11 (DIGITAL/Burroughs Communication System)

Operating System: VMS
Keywords: • Asynchronous communication • Debugging • File transfer • Networking

Distribution media: magnetic tape, RX50.

BURCOM–11 allows a DIGITAL PDP–11 or VAX to communicate with Burroughs computers, using synchronous or asynchronous communication techniques. With either dial-up or leased telephone lines, BURCOM–11 supports the Burroughs point-to-point conversational and the poll-select protocols to give high throughput data transmission with low operating system overhead. Multiple buffers may be used to ensure that the transmission link is fully utilized. BURCOM–11 handles error detection and record retransmission automatically. BURCOM–11 provides user-callable subroutines for sending and receiving messages, establishing a transmission link (including dialing of numbers), terminating a link, and reviewing the line status and error counts.

A version of this product is available for the PDP–11 computer.

Price: $795 – $5000
Contact: Elizabeth F. Epermanis
(919) 942–7801
APPLIED INFORMATION SYSTEMS, INC.
500 Eastowne Drive, Suite 207
Chapel Hill, NC 27514

CALOUT

Operating System: VMS
Keywords: • File transfer • Telecommunications

CALOUT allows you to dial up another computer by entering the phone number at your keyboard. You can then work as a remote user of the other computer, with the additional ability to move files from one system to the other. All types of disk files may be moved between the computers in either direction, including binary program files, with all attributes retained. The package will communicate with any foreign system in ASCII mode.

A version of this product is available for the PDP–11 computer.

Price: $1500
Contact: Carolyn Clyde
(801) 224–5306
CLYDE DIGITAL SYSTEMS, INC.
P.O. Box 4500
Provo, UT 84603–4500

CALOUT/CONTRL

Operating System: VMS
Keywords: • Simulation • Software utilities
• Telecommunications

Two powerful software utility tools running under the VMS and RSTS/E operating systems have been combined to give complete support interactively without the expense of traveling or networking. The computer-to-computer communications tool CALOUT and the training and support tool CONTRL have been combined in a specially licensed package to offer ideal remote user support.

A version of this product is available for the PDP–11 computer.

Price: $5000
Contact: Carolyn Clyde
(801) 224–5306
CLYDE DIGITAL SYSTEMS, INC.
P.O. Box 4500
Provo, UT 84603–4500

COMMX (Communications Exchange)

Operating System: MicroVMS, VMS
Keywords: • Asynchronous communication • Electronic mail
• Telecommunications

COMMX is a smart-terminal emulator and file transfer program. COMMX–FORT is the mainframe FORTRAN module that allows error-correcting file transfer between a micro running COMMX and a mainframe. The file transfer uses the proprietary COMMX protocol (CRC 16 error correction) and allows upload/download of any file, including executing programs. The FORTRAN source code allows customization of the COMMX file transfer into an application on a mainframe.

Files can be text, binary data, or executable programs. Binary files are sent to the mainframe in SIXPAC, a special format that allows storage in a sequential file. When a SIXPAC file is downloaded by a micro, the file is returned to its original binary image. The SIXPAC format requires only a 25% overhead as compared to its original binary image.

Price: $199 – $20,000
Contact: Will Pierce
(818) 716–5220
HAWKEYE GRAFIX
23914 Mobile Street
Canoga Park, CA 91307

Conference

Operating System: VMS
Keywords: • Networking • Operations • Telecommunications
Distribution medium: 1600 bpi magnetic tape.

This system allows up to 256 users to participate in an interactive conference. Input from each user is prefixed with the user's name and then displayed on all other terminals in the conference. Conference can be used in conjunction with Daisychain or Monitor. Access to the conference can be controlled by the conference initiator. Conference works with any type of terminal and requires no special privileges or installation.

Price: $250 – $395
Contact: Tim Bomgardner
(812) 339–5854
RANDOM ACCESS, INC.
Box 2094
Bloomington, IN 47402

CONTRL

Operating System: VMS
Keywords: • Security • Simulation
CONTRL links the manager's terminal to any keyboard on the system and provides remote interactive training and user support. Keystrokes entered at the user terminal and information presented to the terminal are also presented to the manager's terminal. CONTRL also permits security management personnel to monitor interaction at randomly selected terminals at any time, without interruption or intrusion into their job sessions. A complete log file on any session may be kept.

A version of this product is available for the PDP–11 computer.

Price: $950 – $1600
Contact: Carolyn Clyde
(801) 224–5306
CLYDE DIGITAL SYSTEMS, INC.
P.O. Box 4500
Provo, UT 84603–4500

CYX–DV DV11 Multiplexer Driver

Operating System: VMS
Keywords: • Data conversion • Device drivers/handlers

This software driver minimizes the CPU overhead normally associated with message processing. CYX–DV lets you use DV11 communications multiplexers on PDP–11 or VAX computers with the RSX–11M or the VMS operating system. CYX–DV uses DV11 nonprocessor request (NPR) transfers for both input and output, significantly cutting the CPU time required to handle serial communication lines. CYX–DV handles many protocol features automatically as defined in character tables accessed by the DV11.

CYX–DV allows the transmission of a split buffer so that a single transmission block can be sent from two discontiguous buffers. Therefore, you can add headers to transmission blocks even if you have not provided a space for the header adjacent to the data to be sent.

CYX–DV supports multiple protocols and/or character sets and the use of both the synchronous and asynchronous line interfaces supplied for the DV11. CYX–DV is incorporated into the RSX–11M or the VMS executive as a standard loadable driver and conforms to RSX or VMS driver software conventions. CYX–DV transfers data to and from a physically contiguous portion of main memory (up to 48,000 bytes in the PDP–11 version, unlimited size in the VAX version). The buffer is defined when the system is initialized.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $4000
Contact: Barbara Gurstelle
(612) 835–4884
CYTROL, INC.
4620 West 77th Street
Edina, MN 55435

Daisychain

Operating System: VMS
Keywords: • File transfer • Networking • Operations

Distribution medium: 1600 bpi magnetic tape.

This program allows all I/O to and from a master terminal to be simultaneously displayed on up to 256 slave terminals. Master terminal operation is unaffected. Slaves may connect to or disconnect from the Daisychain at any time and can send messages to the master terminal. The master terminal can control access to the chain. Daisychain works with any type of terminal and requires no special privileges or installation.

Price: $250 – $395
Contact: Tim Bomgardner
(812) 339–5854
RANDOM ACCESS, INC.
Box 2094
Bloomington, IN 47402

DECMOD

Operating System: VMS
Keywords: • Down-line loading • Software utilities

This stand-alone system provides operator communications between a DIGITAL host computer and Modicon Series 484 and 584 programmable controllers (PC). This system allows PC ladder-logic programs to be created and documented by the host operator from a VT100 video terminal. Those programs can be stored on disk and selectively downloaded to any PC. Ladder-logic programs may also be up-loaded from selected PCs to allow DECMOD to alert the operator to changes that have been made by local operators.

A version of this product is available for the PDP–11 computer.

Price: $14,000 – $24,000
Contact: G. D. Newman
(713) 789–8880
BILES & ASSOCIATES
6161 Savoy Drive, Suite 500
Houston, TX 77036

DECnet Router Server

Operating System: VMS
Keywords: • Networking • Operations

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This product runs on an Ethernet communications server hardware unit to provide DECnet routing functions in a network of one or more host computers. Those hosts may be Phase III or Phase IV routing nodes or end nodes — for example, DECnet–RT Version 2.1 and DECnet/E Version 2.0. The DECnet Router Server connects directly to the Ethernet to provide routing to nodes off the Ethernet connected through the unit's synchronous/asynchronous lines.

Phase IV DECnet networks are hierarchical networks that can be segmented into areas. The DECnet Router Server supports both intra-(Level 1) and interarea (Level 2) routing for transporting messages between nodes. Those nodes can be remote Phase III/IV routing nodes or end nodes in the same area or different area or other DECnet router servers connected to other Ethernets in the same area or different area. End nodes connected directly to an Ethernet must use DECnet router servers or Phase IV host routing nodes on the same Ethernet for message routing off that Ethernet. A routing node is not required on an

Ethernet if the end nodes connected to that Ethernet communicate only with each other. However, if the Ethernet directly connects nodes with different area addresses, an area routing node is required to transport messages between those areas. Use of the DECnet Router Server off-loads certain communications processing on host nodes that would otherwise serve as routing nodes on the Ethernet.

The DECnet Router Server implements Phase IV DECnet asynchronous and synchronous DDCMP routing and network management. Through the use of Phase IV DECnet protocols, DECnet networks can contain up to 63 areas, each containing up to 1023 nodes, given proper network planning. The DECnet Router Server can be used to connect to Phase III nodes, providing migration of Phase III networks with connectivity to Phase IV Ethernet nodes.

The DECnet Router Server is warranted for use only with supported Phase III and Phase IV DECnet products supplied by DIGITAL.

Refer to SPD #30.34.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $2420 – $2660
Contact: Consult your local DIGITAL sales office (see Introduction).

DECnet Router/X.25 Gateway

Operating System: VMS
Keywords: • Networking • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

The DECnet Router/X.25 Gateway runs on an Ethernet communications server hardware unit to provide DECnet routing functions for a network of one or more host computers, through point-to-point links, such as leased lines or the switched telephone network, or CCITT X.25 Packet-Switching Data Network (PSDN) switched virtual circuits. This network may include Phase III or Phase IV routing nodes or end nodes.

The DECnet Router/X.25 Gateway is warranted for use only with supported Phase III and Phase IV DECnet products supplied by DIGITAL.

Refer to SPD #30.41.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $2660
Contact: Consult your local DIGITAL sales office (see Introduction).

DECnet–VAX — VMS Network Software (Full Function and End Node)

Operating System: MicroVMS, VMS
Keywords: • Down-line loading • File management
• File transfer • Networking

Distribution media: RX01, RX50, TU58 DECtape II cartridge.

DECnet–VAX allows a suitably configured VAX/VMS or MicroVMS system to participate as a routing or end node in DECnet computer networks. Using DECnet–VAX Version 4.0, DECnet computer networks can contain up to 1023 nodes, given proper network planning. DECnet–VAX interfaces are standard components of VAX/VMS for use on a local, stand-alone system. The DECnet–VAX end node and full-function products are each packaged separately for MicroVMS. The DECnet–VAX software, when installed on a VAX/VMS system, enables communication between different networked systems that use the same protocols.

DECnet–VAX offers task-to-task communications, file management, down-line system and task loading, network command terminals, and network resource-sharing capabilities, using the DIGITAL Network Architecture (DNA) protocols. DECnet–VAX communicates with adjacent and nonadjacent Phase III and Phase IV nodes (adjacent nodes control opposite ends of a point-to-point communication line). DECnet–VAX is a Phase IV network product and is warranted for use only with Phase III and Phase IV products supplied by DIGITAL.

VAX/VMS programs written in VAX MACRO and native-mode high-level language can use DECnet–VAX capabilities. Programs executing in PDP–11 compatibility mode cannot use DECnet–VAX.

The network functions available to a DECnet–VAX user depend in part on the configuration of the rest of the network. Each DECnet product offers its own functions and its own set of features to the user. Networks consisting entirely of DECnet–VAX Phase IV nodes have all the functions described in the SPD (Software Product Description). Networks that combine DECnet–VAX nodes with other DECnet products may limit the functions available to the DECnet–VAX user because some DECnet–VAX features may not be supported by all DECnet products. Conversely, a user of another DECnet implementation will not necessarily have access to all DECnet–VAX functions.

The DECnet products and functions available to users on mixed networks can be determined by comparing the SPDs for the appropriate products.

Refer to SPD #25.03.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $245 – $3250
Contact: Consult your local DIGITAL sales office (see Introduction).

DECnet/SNA Gateway Products

Operating System: MicroVMS, VMS
Keywords: • File transfer • Networking • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RK07, RL02, RX01, RX02, RX50, TU58 DECtape II cartridge.

The DECnet/SNA Gateway Products allow users to share information among MicroVMS, VAX/VMS, and RSX–11M/11M–PLUS systems in a DECnet environment and IBM systems in an SNA (System Network Architecture) environment. DIGITAL system users can simultaneously access IBM application programs or other system resources, act as a 3270 display station, transfer data between VAX/VMS or RSX file subsystems and IBM batch subsystems acting as an RJE workstation, and implement distributed application programs that run between DIGITAL and IBM systems.

The DECnet/SNA Gateway family includes two variants of the Gateway system and four access routines for each supported operating system.

Refer to SPD #30.15.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $100 – $2000
Contact: Consult your local DIGITAL sales office (see Introduction).

DECnet/SNA VMS DISOSS Document Exchange Facility

Operating System: MicroVMS, VMS
Keywords: • Documentation • File transfer • Networking

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

This layered software product allows DECnet users to participate in an IBM office systems network, the vehicle for document library and distribution services in an IBM Systems Network Architecture (SNA) networking environment. Access to the IBM/SNA network is the DECnet/SNA Gateway.

DDXF (DISOSS Document Exchange Facility) users can access both document distribution and library services. Those services are provided by the IBM host-supported Distributed Office Support System/370 (DISOSS/370) program product. DISOSS/370 provides centralized document library and distribution services for such IBM office systems as the IBM Displaywriter, the 5520 Administrative System, the IBM 8100 Information System, and the Scanmaster I image printer. DDXF communicates with the DISOSS/370 host system by using the SNA Advanced Program to Program Communication (APPC) facility and the Document Interchange Architecture/Document Content Architecture (DIA/DCA) protocols.

In a DISOSS/370 host document library, the DDXF user can:

- File a document created on the VAX/VMS system with associated profile information in a DISOSS/370 host document library and file profile information for an external (nonsystem) document in the DISOSS/370 host document library)

- Search for documents filed by the user or by other DISOSS/370 users and delete ownership of documents filed
- Retrieve documents and associated profile information to the VAX/VMS system from the DISOSS/370 host document library
- Update document profile information and access codes for documents filed
- Print, on a DISOSS/370 host-controlled printer, a document filed in the DISOSS/370 host document library or filed locally on the VAX/VMS system
- Send, through the DISOSS/370 host, documents and/or messages to other DISOSS/370 users
- Receive documents and/or messages distributed by other DISOSS/370 users through the DISOSS/370 host system
- Display status information about distribution requests made by DDXF to the DISOSS/370 host system

Refer to SPD #26.72.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $750 – $1500
Contact: Consult your local DIGITAL sales office (see Introduction).

DECnet/SNA VMS Distributed Host Command Facility

Operating System: VMS
Keywords: • Data conversion • File transfer • Networking • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This layered software product, used in conjunction with the DECnet/SNA Gateway, allows suitably configured VAX/VMS systems in a DECnet network to be accessed from IBM host–controlled 327x display stations in a Systems Network Architecture (SNA) networking environment. The IBM system gains access to VAX/VMS systems through the DECnet/SNA Gateway.

In an IBM distributed processing environment, 327x terminal operators can access, monitor, and control remote IBM 8100 Information System computers and suitably configured Series/1 small business computers by using Host Command Facility (HCF), an IBM-provided, mainframe-based program product. The 327x terminal operator using HCF can log into the remote 8100 or suitably configured Series/1 and invoke system services and user programs. In addition, HCF allows the terminal operator at the central site, the Network Control Center, to access the maintenance, service, and control functions of the remote system for problem determination, problem isolation, and remote system control.

The system user may run any VAX/VMS application that can run in VAX/VMS command mode or line mode or is designed to use a 3270 data stream in a 3270 pass-through mode. The system also allows FLSCN (full screen) mode sessions from IBM's NCCF/Terminal Access Facility; OPCTL (operator control) mode sessions from NCCF/TAF are not supported.

Refer to SPD #26.71.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1500
Contact: Consult your local DIGITAL sales office (see Introduction).

DECnet/SNA VMS Printer Emulator

Operating System: MicroVMS, VMS
Keywords: • Networking • Printing

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

This layered software product allows suitably configured VAX/VMS or MicroVMS systems in a DECnet network to receive printable data from IBM host–based applications. Those applications have been developed to produce output for an IBM 3287 printer in system mode that is connected to an IBM 3274 cluster controller in a Systems Network Architecture (SNA) networking environment. Access from the IBM system to VAX/VMS systems is through the DECnet/SNA Gateway.

The PrE Access software allows VAX/VMS users to direct the received output to be either printed through the VAX/VMS Print Symbiont or spooled to a disk file. PrE is configured and controlled through a DIGITAL Command Language–style interface for ease of use. PrE can accept data in SNA Character String (SCS) format (LU Type 1) and 3270 Data Stream format (LU Type 3)

Refer to SPD #26.70.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $200 – $1000
Contact: Consult your local DIGITAL sales office (see Introduction).

DECprom (PROM Programming Utility)

Operating System: VMS
Keywords: • Device drivers/handlers • File transfer • Programming tools • Software utilities

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This software utility controls a programmable read-only memory (PROM) or erasable programmable read-only memory (EPROM) programming device. The utility transfers program images from a file on a host development system to a PROM mounted in the socket adapter of

the programming device. The utility supports any PROM programmer that conforms to the protocols used by VAX DECprom. The programmer hardware connects to a VAX/VMS host development system over an RS232C serial line, which is distinct from the console interface on the host system.

VAX DECprom supports five types of binary program image files: MicroPower/Pascal MIM files; LDA files; a restricted format of the RSX–11 Task builder TSK file, which is a nonoverlaid memory image file without a task header or checkpoint area; unformatted memory image files similar to nonoverlaid RT–11 SAV files; and VAX/VMS EXE system image files without headers. To create a PROM- or EPROM-based application, the user writes the application in a VAX/VMS supported language, which can then be linked into one of five supported file types. When a program image file is created, VAX DECprom can be used to transfer the contents, or a subset of the contents, to one or more PROMs or EPROMs.

VAX DECprom also supports MOS TECHNOLOGY and INTEL INTELLEC 8/MDS formatted files as ASCII program image files. Those files are created by other programs, such as cross-assemblers, and can be used by VAX DECprom to program PROMs and EPROMs.

Refer to SPD #26.49.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $750
Contact: Consult your local DIGITAL sales office (see Introduction).

DECserver 100 Terminal Server

Operating System: VMS
Keywords: • Asynchronous communication • Networking

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This network terminal switch for Ethernet Local Area Networks provides a convenient method for logically connecting up to eight DIGITAL asynchronous terminals to one or more service nodes (hosts) on an Ethernet. The connected terminal uses applications programs and utilities as though the terminal were connected to that host through a DZ11 or DMF32 device. Thus, the DECserver 100 may connect terminals to service nodes in place of traditional interfaces, except for a console terminal.

The DECserver 100 implements the Local Area Transport (LAT) protocol for communication with service nodes that implement that protocol on the same Ethernet. The new interface has been optimized for high terminal I/O performance over an Ethernet while reducing host CPU cycles required to handle interrupts. Under most I/O loading conditions, therefore, the DECserver 100 may improve performance over direct terminal connections.

Terminal access using the DECserver 100 does not require DECnet running in the same service node; LAT uses the Ethernet addressing mechanism to transport terminal messages. However, one Phase IV DECnet load host must be running on the same Ethernet to allow DECserver 100 software to be down-line loaded.

Refer to SPD #30.43.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $150
Contact: Consult your local DIGITAL sales office (see Introduction).

DECtalk Mail Access

Operating System: VMS
Keywords: • ALL–IN–1 • Electronic mail • Office systems • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This VAX/ALL–IN–1 application provides users with convenient access to their ALL–IN–1 documents and messages from a tone dial telephone. Users can dial up to their ALL–IN–1 system and command the DECtalk unit to read the mail; reply, using a prewritten reply in a specific folder; or delete the mail. Nonmail messages may also be read and deleted.

Commands are entered by using the telephone keypad to control the software and to gain access to a user's account. The commands can select, read, and delete messages and documents; select and send standard answers to mail messages; and modify speech mode by letter, word, or sentence and speech rate (slow, normal, or fast).

System and user text-to-phoneme dictionary support is provided, allowing customizaton of the pronunciation of abbreviations and special words. The size of those dictionaries, which are loaded into DECtalk DTC01's user-definable lexicon, is controlled only by the size of the DECtalk DTC01's lexicon.

System management options facilitate the authorization of user access, the specification of a site-specific welcome message, optional logging of transactions errors, and the temporary suspensions of DECtalk mail access to the system.

Refer to SPD #26.45.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $7500
Contact: Consult your local DIGITAL sales office (see Introduction).

Delphi

Operating System: VMS
Keywords: • Data base management • Electronic mail • Networking • Telecommunications

Memory required: 4M. Distribution medium: magnetic tape.

This on-line information videotex network is written in FORTRAN. Delphi is used stand alone as an office automation tool and has optional gateways to international networks.

Price: $5000 – $50,000
Contact: Kip Bryan
(617) 491–3339
GENERAL VIDEOTEX CORP.
3 Blackstone Street
Cambridge, MA 02139

DIGICOMM–11

Operating System: MicroVMS, VMS
Keywords: • Electronic mail • Telecommunications

Memory required: 256KB and 10MB storage capacity.

This self-contained package, easy to learn and use and written in MACRO–11, provides low-cost communications on private telegraph and public Telex lines. The package incorporates message switching, text processing, and office automation. The system applies store-and-forward technique; runs by itself in real time for 24 hours a day; can enter, edit, store, and retrieve any document; does not require a DP staff; and has reentrant major parts.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $10,000
Contact: Dr. E. Wessner
(0222) 54 33 52–53
C.T.A. COMPUTER TECHNOLOGY & AUTOMATION
Margaretengürtel 12
A–1050 Vienna
Austria

DL–11 Terminal Line Driver

Operating System: VMS
Keywords: • Device drivers/handlers

Memory required: 307 bytes. Distribution medium: magnetic tape.

This driver allows VAX/VMS installations to use DL–11 interfaces for the connection of additional terminal lines to the system. All the functions of the standard VAX/VMS DZ–11 driver are supported except dial-up lines and software control of line parameters. This driver may also be used as the skeleton for drivers supporting other terminal line interfaces.

Documentation is in the form of comments in the listing. DECUS number VAX–2.

Price: $5 – $225
Contact: DECUS (see Introduction)

DMF32 Parallel Port Driver

Operating System: VMS
Keywords: • Device drivers/handlers

Distribution medium: magnetic tape.

This general-purpose program to interface a parallel in/out user device is written for VAX–11/780 systems but should also work on other VAX systems. This driver implements DMA data transfer by block mode on the device but does not implement DR11–C compatibility mode or silo mode. DECUS number VAX–48.

Restrictions: Only DMA mode has been implemented.

Price: $5 – $225
Contact: DECUS (see Introduction)

DMFDRV

Operating System: VMS
Keywords: • Development tools • Device drivers/handlers • File transfer • Telecommunications

Memory required: 1MB.

This communication device driver for the synchronous port of the DMF–32 combo board provides DMA support of bisynchronous protocol 2780/3780 and 3270 host and tributary. DMFDRV supports ASCII and EBCDIC transparent and nontransparent transmission modes. Protocol is table driven. Function code is compatible with the DV Driver from PBS. DMFDRV is written in MACRO.

Price: $12,000
Contact: Arthur Cacossa
(212) 425–0200
PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

DMG/NET

Operating System: VMS
Keywords: • Asynchronous communication • Debugging • File transfer • Networking

Distribution medium: 800/1600 bpi magnetic tape.

DMG/NET provides controlled computer-to-computer communications. DMG/NET features indirect command file processing, password protection on any destination, excellent error recovery and reporting, alternate-path capability, and an on-line help facility.

An easy-to-use operator interface allows nontechnical users to access a variety of computers interactively and to transfer files to/from remote systems. DMG/NET uses standard DIGITAL ASYNC ports and standard DIGITAL operating systems and interfaces with most other computers, including micros.

Networks can be a mix of direct (EIA) connections, leased lines with modems, autodial units, and X.25 packetizers (PADS). Between compatible DIGITAL computers, full file-transfer capability includes error checking and support for RMS, binary, WORD–11, USER–11, and other file formats. To/from non-DIGITAL computers, transfers are ASCII only. Virtual terminal access to any system with ASYNC or X.25 ports is possible.

Single CPU, rentals, and corporate licensing are available.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $30,000
Contact: Ken Allsopp
(416) 225–7788
DIGITAL MANAGEMENT GROUP LTD.
4800 Yonge Street
Willowdale, Ontario M2N 6G5
Canada

DN11 Driver

Operating System: VMS
Keywords: • Data conversion • Device drivers/handlers • Networking • Telecommunications

The VAX DN11 Driver supports the DN11 Automatic Calling Unit Interface on the VAX/VMS operating system. The DN11 device driver and hardware, under user-programmed instructions, control a Bell 801 Automatic Calling Unit (ACU) or equivalent to dial any telephone number in the U.S. Direct Distance Dial Network by establishing a data link between the processor and remote data terminal equipment.

The DN11 ACU interface consists of the DN11–AA, a prewired system unit that mounts up to four DN11–DA line interfaces. When a system unit has more than one line interface, CSR addresses must be consecutive.

The first DN11–DA line interface in the DN11–AA system unit serves as the controller for the remaining line units. For a DN11 having a controller designation of A, equipped with four DN11–DA line units, those four devices must be configured as OBA0:, OBA1:, OBA2:, and OBA3:.

Refer to SPD #25.96.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

DR11–C Driver

Operating System: VMS
Keywords: • Asynchronous communication
• Device drivers/handlers • Programming tools
• Telecommunications

The VAX DR11–C Driver supports the DR11–C under the VAX/VMS operating system. The DR11–C is a non-DMA UNIBUS device that provides a general-purpose interface between the UNIBUS and a user's peripheral. The device provides capability for program-controlled parallel transfers of 16-bit data between a VAX processor and an external device. The DR11–C is a single unit for each controller device.

The VAX DR11–C device driver allows VAX–11/750 and VAX–11/780 systems to use the DR11–C as a basic parallel I/O interface between the UNIBUS and an unspecified user peripheral. The VAX DR11–C device driver will support a general user application. VAX DR11–C driver functionality does not incorporate a specific application, because a variety of peripherals can be used. The VAX DR11–C driver includes many general-purpose parameters to simplify several applications and also supports DR11–C operation in maintenance loopback mode.

Refer to SPD #25.97.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

DRE11–C Device Driver

Operating System: VMS
Keywords: • Asynchronous communication
• Device drivers/handlers • Source code control

Distribution media: RX01, TU58 DECtape II cartridge.

The VAX DRE–11 driver supports the DRE11–C interface, a general-purpose parallel interface between the VAX/UNIBUS adapter (UBA) and a user's peripheral. The driver performs Direct Memory Access controlled block transfers of 16-bit data between a VAX processor and an external device. Multiple blocks of data can be transferred without setting up new DMA parameters by hardware-controlled switching of alternate buffers in the processor's memory.

The driver enables the user to communicate with the interface, using the functions in a VAX MACRO language program. The I/O functions are accessible through the $QIO System Service, which may be called from VAX FORTRAN or any high-level language.

Refer to SPD #26.17.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

Driver (Fast) for a DR11–B Used in a DA11–B Mode

Operating System: VMS
Keywords: • Device drivers/handlers • File transfer

The driver for the DR11–B is written for DA11–B mode but can be modified for other modes. This driver is not standard, although a standard driver for a DR11–B is included. A complete I/O initiation and device driver system is used that does not use the VAX/VMS executive QIO mechanism. The resulting mechanism allows up to 2000 separate I/O transfers a second as opposed to 500 a second, using a QIO system service, and reduces I/O overhead from 1.5ms a transfer to 0.1ms. This I/O mechanism can be applied to other devices.

The documentation discusses the I/O initiation and device driver system, as well as methods of making the VAX/VMS QIO mechanism faster.

Also included is a routine that returns the VAX–11/780 clock time. DECUS number VAX–89.

Price: $5 – $225
Contact: DECUS (see Introduction)

DRX11–C/VMS Driver

Operating System: VMS
Keywords: • Device drivers/handlers

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

The DRX11–C device driver enables the user to access the DRE11–C double-buffer DMA interface. Tasks written in MACRO or FORTRAN can communicate with the hardware interface under the VAX/VMS operating system. This version is available in Europe only.

DRX11–C supports word transfer, single- and multiple-block transfer, the use of direct or buffered data path, the reading and writing of status and function bits, special interrupt processing, and QIO interface.

Refer to SPD #26.64.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $500 – $1500
Contact: Consult your local DIGITAL sales office (see Introduction).

DTS–11

Operating System: VMS
Keywords: • Retail • Telecommunications

DTS–11 is a Binary Synchronous Communications (BSC) package providing telecommunications with Data Terminal Systems Series 500 electronic cash registers. DTS–11 uses a 3780-type protocol for transmitting and receiving data between the host and cash register(s). The package supports both host and store IDs for security purposes. DTS–11 operates at a line speed of 2400 baud, using Bell System 201 or equivalent modems and also operates in a local mode, using a modem eliminator.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: John T. Rasted
(203) 265–2226
SOFTWARE DYNAMICS, INC.
1000 Yale Avenue, P.O. Box 500
Wallingford, CT 06492

DVDRV

Operating System: VMS
Keywords: • Development tools • Device drivers/handlers • File transfer • Telecommunications

This communication device driver for bisynchronous protocols supports DMA; protocol is table driven. DVDRV supports 2780/3780 and 3270 master and tributary and ASCII and EBCDIC transparent and nontransparent transmission modes. Function code is compatible with the DMF–32 driver from PBS. DVDRV is written in MACRO–32.

Price: $12,000
Contact: Arthur Cacossa
(212) 425–0200
PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

DX/VMS

Operating System: VMS
Keywords: • Asynchronous communication • Data conversion • Diagnostics • Word processing

DX/VMS, a VAX–11 FORTRAN software package, enables a WPS–8 word processing system running WPS–8, WPS–8/78, or WPS–8/MTS software to communicate with the VAX/VMS host over an asynchronous terminal interface. The WPS–8 system appears to the host application programs as a normal terminal. Communication between the WPS–8 system and the VAX/VMS system uses the DX error-correcting message protocol.

DX/VMS effectively links distributed stand-alone WPS–8 systems and the host VAX/VMS system for better system use and data sharing. The DX/VMS package utility programs convert VAX/VMS files stored in word processing format to VAX/VMS files stored in ASCII format and vice versa.

DX/VMS enables the WPS–8 system user to store and retrieve word processing format files on a VAX/VMS system. The VAX/VMS disk structure enables the WPS–8 system user to access documents filling several document floppies or large documents filling an entire floppy.

The WPS–8 user can also use the high-speed line printer connected to the VAX/VMS system to print rough drafts and other documents that do not require letter-quality printing. That increases system throughput and the availability of the WPS–8 letter-quality printer for printing final drafts. Conversely, the VAX/VMS system user can output text files converted from the VAX/VMS file system on the WPS–8 letter-quality printer.

Finally, the user can create VAX/VMS source language and data files off line from the VAX/VMS system, using the WPS–8 editor, and then transmit the files to the VAX/VMS system for processing.

Refer to SPD #25.25.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $250
Contact: Consult your local DIGITAL sales office (see Introduction).

DY32 DECdataway Local Area Network Software

Operating System: VMS
Keywords: • Data conversion • File transfer • Networking • Telecommunications

This software package provides local area network communications for VAX/VMS host systems. It allows user application programs in a VAX/VMS host to communicate with multidropped devices connected to the VAX/VMS host through the DECdataway.

VAX DY32 hosts control the DECdataway through the DECdataway controller driver, which provides a standard operating system interface to the DECdataway controllers. Through the interface, the network software and other processes in the host can determine the status of each remote DECdataway device. The interface allows simultaneous requests to all addresses on the DECdataway, verifies the validity of the request, and passes it to the DECdataway controller. The DECdataway controller driver treats each DECdataway address as a separate physical device unit and logs DECdataway errors, which are put in a file on the system disk and reported by a VAX/VMS utility.

The DECdataway Manager, the DECdataway house-keeping program, loads the DECdataway driver, runs confidence tests on the controller, loads and starts the controller's microcode, and notifies the Automatic Reboot Facility when a remote DECdataway device first comes on line and needs service. The DECdataway Manager runs during DY32 system start-up and whenever the DECdataway driver notifies it that conditions on the DECdataway require its attention.

Refer to SPD #25.57.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

Ethernet Terminal Server

Operating System: None required
Keywords: • Networking

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This efficient network terminal switch for Ethernet local area networks provides a convenient method to logically connect up to 32 DIGITAL asynchronous terminals to one or more service nodes (hosts) on an Ethernet. Once the terminal is connected, the user can use local applications programs and utilities as though the terminal were directly connected to that host through a DZ11 or DMF32 device. As such, the Ethernet host(s) does not need any direct terminal connections other than for a console.

The Ethernet Terminal Server implements the Local Area Transport (LAT) protocol for communication with service nodes that implement the host side of this protocol on the same Ethernet. That interface handles character I/O efficiently and thereby provides high terminal I/O performance over an Ethernet while reducing host CPU cycles required to handle interrupts. Hence, the Terminal Server has an important advantage over direct terminal connections such as DZ11 or DMF32.

Refer to SPD #30.35.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $550
Contact: Consult your local DIGITAL sales office (see Introduction).

FlexLink™ Communications (Connectivity) Software

Operating System: VMS
Keywords: • CAD/CAM • File transfer • Networking • Telecommunications

These products link dissimilar operating systems and computers using a variety of I/O interconnect hardware. The multiuser base product provides bidirectional file transfer and virtual terminal operations. Some configurations provide full-screen support and transparent peripheral sharing as well. Users may write cooperating utilities in any language, using the generic I/O calls in each machine. When high-speed I/O hardware is used, real, usable system throughput ranges from 1 to 5 megabits/second, depending on the computers and operating systems.

Price: $3500 – $45,000

Contact: Michael Millspaugh
(206) 228–8980
FLEXCOMM CORP.
711 Powell Avenue, S.W.
Renton, WA 98055

FUSION™

Operating System: ULTRIX–32, UNIX* (System V), VMS

Keywords: • Device drivers/handlers • File transfer • Networking

Distribution medium: TU77 magnetic tape.

FUSION Ethernet software provides complete access to the programs, files, and computing power of a remote computer system. Using file-transfer commands, a user can transport groups of files or complete directory hierarchies between previously incompatible processors. With the virtual-terminal function, a user can remotely log on to another system, executing commands as though connected by a local terminal. The network-management functions monitor network performance and isolate faults. The network utilities allow for mail and print service and distributed command execution. In addition, any system can be designed as a file or a print server for access by other systems on the FUSION network.

Vendor-independent FUSION can interconnect various computers, operating systems, and local area network (LAN) hardware components. FUSION can link PDP–11, VAX, 68000, 8086, IBM–PC, and PC-compatible processors on the same Ethernet network while crossing UNIX,* UNIX*-like, VMS, and MS/DOS operating system boundaries. Network hardware is available from DIGITAL, 3Com, Interlan, Excelan, Communication Machinery Corp., and Univation. Data transfer rates exceed one million bits a second, making FUSION 2 to 20 times faster than comparable software packages.

FUSION customers include end users and major manufacturers. Print server and file server capabilities serve budget-minded research and office environments. OEMs bundle FUSION into their own systems, enhancing their products by providing high-performance software to prospective customers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $750 – $6000

Contact: Sales Department
(213) 394–7200
NETWORK RESEARCH CORP.
1101 Colorado Avenue
Santa Monica, CA 90401

GCLINE

Operating System: VMS

Keywords: • Automotive • CAD/CAM • Graphics • Mapping

Distribution media: 9-track 800/1600 bpi magnetic tape; others on request.

GCLINE is a communication protocol servicing Kongsberg on-line drafting tables. GCLINE searches and reads disk files, handshakes with Kongsberg Graphic Controller (GC300), and transmits plot data. GCLINE also reads disk files sequentially backwards when the table controller requests backspace mode. In digitizing mode, GCLINE writes digitized coordinates back from graphic table to disk.

A version of this product is available for the PDP–11 computer.

Price: Free with Graphic Controller

Contact: Hans Engfelt
47–3–73 82 65
A/S KONGSBERG VAPENFABRIKK
Data Systems Division
P.O. Box 25
N–3601 Kongsberg
Norway

GOULD/DEC Data Link

Operating System: MicroVMS, VMS

Keywords: • Asynchronous communication • File transfer • Networking

The GOULD™/DEC Data Link provides high-speed communications between any Concept 32™–series computer running MPX™2.x or 3.x software and any PDP–11, LSI–11, or VAX computer running RSX–11 or VMS software. The basic link supports Gould and DIGITAL system tasks that can exchange data using standard read/write calls. Those tasks specify IDs or task names to identify the tasks with which data should be exchanged. When multiple requests are pending, transfers are given precedence according to the I/O priority assigned to the Gould task.

The GOULD/DEC Data Link permits Gould tasks to access DIGITAL peripherals and executive functions. To Gould users, the DIGITAL peripherals appear as if they were connected to the Gould computer.

DIGITAL tasks may also access Gould peripherals, executive functions, and files. Gould peripherals appear to the DIGITAL user as if they were connected to the DIGITAL computer. Gould files may be accessed by the DIGITAL user in the same way as DIGITAL files, and the contents are automatically translated to DIGITAL file format. Gould binary or ASCII files can thus be read or written to/from magnetic tapes in DIGITAL formats, using tape drives connected to either the Gould or the DIGITAL computer. Terminals connected to either the DIGITAL or the Gould computer can be used to log on either computer.

With the Q–NET product, the Gould computer becomes part of DECnet, with all its file transfer, data transfer, and remote log-on facilities.

The link hardware consists of a Gould HSD Interface, a control logic card, and a DIGITAL Q-bus- or UNIBUS-compatible DMA Interface. Cable lengths up to 250 feet are supported with the standard drivers. Optional drivers allow cable lengths up to 1000 feet. Raw transfer rates are up to 700KB for Q-bus and 1000KB for UNIBUS.

GOULD,™ Concept 32,™ and MPX™ are trademarks of Gould Computer Systems Division, Ft. Lauderdale, FL.

A version of this product is available for the PDP–11 computer.

Price: $14,790 – $21,220
Contact: Wayne R. Fox
(615) 482–6649
SCIENCE APPLICATIONS INTERNATIONAL CORP.
152 Fairbanks Road
Oak Ridge, TN 37830

HASP

Operating System: VMS
Keywords: • Networking • Software utilities

This generalized communications package, installed as a system utility, can operate as an emulator of any standard HASP multileaving workstation (RJE mode) or as a host to other workstations (host mode). The protocol uses bidirectional communications and automatic character compressions to provide line efficiencies that are not available with packages such as the 2780 or the 3780. Full support is provided for an operator console plus the maximum concurrent mix from each of seven input, print, and punch streams. HASP requires a DU–11, DUV–11, DPV–11, DUP–11, or a DMF–32; optional hardware supported includes KG–11 and DN–11.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $5500
Contact: Sales Department
(301) 864–3700
GEJAC, INC.
P.O. Box 188
Riverdale, MD 20737

HASP COMBOARD™

Operating System: ULTRIX–32, UNIX* (Berkeley, System V), VMS
Keywords: • Data conversion • Device drivers/handlers • Pre- and postprocessors • Source code control

COMBOARD, a front-end data communications processor that plugs directly into the PDP–11 UNIBUS, is a hex-height module using a 16-bit microprocessor, providing speeds up to 56 kilobytes/sec. Software is HASP protocol and has interfacing utilities for RSTS/E, RSX–11M/M+, and all UNIX* systems. A device driver is also included. HASP protocol emulator runs directly on the COMBOARD, and all other I/O software runs in the DIGITAL host. The price includes source code to all but the HASP emulator.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $13,900 – $26,900
Contact: Bill Martin
(800) 772–3282
SOFTWARE RESULTS CORP.
2887 Silver Drive
Columbus, OH 43211

HASP+ VAX/VMS Interconnect Software

Operating System: VMS
Keywords: • File transfer • Networking • Software utilities • Telecommunications

An efficient, cost-saving, generalized communications software package operating as a utility on the VAX system, HASP+ enables the VAX to communicate with major mainframes and networks (IBM, DIGITAL, CDC, Honeywell, Cybernet, and so on). Operating in host mode, HASP+ permits communication with other multileaving HASP workstations, such as Data 100, IBM System 36, IBM System 388, IBM/PC, and other DIGITAL computers).

HASP+, which has been proved in more than 1000 sites worldwide, uses the efficient multileaving, synchronous HASP protocol that is designed for high-speed bulk transfer of data, such as file transfers or performing remote job entry (RJE). HASP+ is at least 30% more efficient than 2780/3780 in throughput and is much more convenient to

use. HASP+, using a DMF32 interface device and standard DIGITAL communication hardware, is the lowest VAX interconnect solution on the market today.

The full complement of input, print, and punch streams is supported, as well as a console stream. Full console support is available to any terminal on the VAX. HASP+ also supports autodial to multiple sites with multiple phone numbers from a single queue.

With the RJE host functionality option, a VAX can operate as the mainframe in an RJE network. Other HASP workstations can submit jobs to the VAX batch queue and receive the output on their HASP print streams.

HASP+ can be installed by the user's DP staff and is backed by a 30-day, no-risk acceptance period.

Price: $5500
Contact: Skip Berlin
(503) 687–2520
DATANEX, INC.
P.O. Box 1728
Eugene, OR 97440

HILDA (High-Level Data Abstraction) System

Operating System: VMS
Keywords:
- Data base management
- Programming tools
- Query facilities

Distribution medium: 9-track 1600 bpi magnetic tape.

This 3-layer system provides power potential to an Intel Data Base Processor (DBP) attached to a VAX computer. HILDA establishes efficient communication to the DBP and supports the data-abstraction features of the DBP.

Each layer within HILDA plays a specific role during communications. The first layer, the Service Post Protocol (SPP), provides an error-correcting asynchronous protocol, which is the foundation of the other layers. The second layer, the DBP Semantics Specifications Package (DBPSSP), is a collection of assembly tools that serves as a cross-assembler to assemble DBP machine code and direct it to DBP for execution. The third level, the DBP Query Language (DBPQL), is a high-level query processor that enables the analyst to communicate with the DBP through English-like commands. A parser generator package (PARGEN) is included to create and manipulate query statement syntax and semantics.

The HILDA system is written in Pascal and FORTRAN–77 for interactive execution and is designed for implementation on a VAX computer with VMS Version 3 operating system, an Intel Data Base Processor, and an RS–233 connection.

Price: $1400
Contact: Ruthann Jones
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30605

IBM 2780/3780

Operating System: VMS
Keywords: • Networking • Telecommunications

This communication subsystem for UNIBUS-based computers provides data transfer by means of a DMA facility and dual-host support.

A version of this product is available for the PDP–11 computer.

Price: $9000
Contact: Mogens Poulsen
01–20 00 66
A/S DATALOG
Rygaards Alle 104
DK–2900 Hellerup
Denmark

IBM 3270

Operating System: VMS
Keywords: • Networking • Telecommunications

This subsystem for UNIBUS-based computers includes a DIGITAL multiplexer from 8 to 32 channels, DMA data transfer, dual-host support, and full-screen buffer facility emulating IBM 3277 terminals on a VT100 terminal.

A version of this product is available for the PDP–11 computer.

Price: $13,000
Contact: Mogens Poulsen
01–20 00 66
A/S DATALOG
Rygaard Alle 104
DK–2900 Hellerup
Denmark

IBMmvs/DECnet Gateway

Operating System: VMS
Keywords: • Data conversion • File transfer
• Information management

Interlink's IBMmvs/DECnet Gateway combines an intelligent front-end communications processor linked to an IBM system through a high-speed data channel with sophisticated IBM host-resident software developed by Interlink. The software includes features that enable DECnet users to submit/retrieve batch jobs to/from IBM/MVS systems directly from a DECnet node, provides DECnet users with single-command access to the IBM print queue without having to wait for a turn in the batch stream, and allows for directory lookup of data set names in the IBM/MVS catalog in DIGITAL-compatible ways.

The IFT utility gives IBM users access to DIGITAL files, using TSO/ISPF (menu-driven screens), a TSO processor, or batch. Just as DIGITAL users can access IBM data sets without having to learn JCL, the IBM user can access DIGITAL files without having to learn DCL.

This system operates at level 7 of the ISO networking model, providing application program-to-application program communications. Other features of this intelligent communication system include high-speed file transfer; file access at the record level; data security, using ACF and RACF; error message correlation and translation; and transparent data translation of all data types, including character, binary, floating point, numeric string, packed decimal, and so on.

The system is based on a PDP–11/23 processor or optional PDP–11/73 with 512K bytes of RAM, 10MB Winchester disk, and dual 5¼" diskettes.

A version of this product is available for the PDP–11 computer.

Price: $85,000 – $115,000
Contact: Bob Schinlever
(415) 792–6212
INTERLINK COMPUTER SCIENCES, INC.
39055 Hastings Street, Suite 203
Fremont, CA 94536

ICOM40 (Integrated Communication)

Operating System: Independent, VMS
Keywords: • Development tools • Down-line loading • Microprocessor development • Programming tools

The two communication programs in this package support the Tektronix 8540 Integration Unit. Term Mode allows the 8540 and the emulator to be accessed from any port on the VAX. Term Mode also allows 8540 and VAX operating system commands to be intermixed from the same terminal. COM supports Tektronix Hexadecimal I and II, Intelhex, and Motorola S–records for down-line loading Tektronix software object code into development systems for emulation and code execution.

Price: $2000
Contact: Local Tektronix Representative
—
TEKTRONIX, INC.
Walker Road Industrial Park, P.O. Box 4600, MS 92–635
Beaverton, OR 97075

IEC11–V Device Driver for VAX/VMS

Operating System: VMS
Keywords: • Device drivers/handlers • Networking • Pre- and postprocessors • Telecommunications

Distribution media: RX01, TU58 DECtape II cartridge.

The IEC11–V Device Driver allows programs written in MACRO–32, FORTRAN, and BASIC to communicate with IEEE Std. 488 devices connected to the IEC11–A and IEC11–B. Communication is implemented through a choice of direct QIO calls to the executive or a set of subroutines callable from high-level languages.

The IEC11–A and IEC11–B are digital input/output interfaces for the IEEE Std. 488 (1978) Programmable Interface Bus System, also known as the General Purpose Interface Bus (GPIB). The interface boards are compatible with both ANSI MC 1.1 and IEC 625.1 standards.

The IEC11–A is an interrupt-driven interface with full IEEE–488 control capabilities. The IEC11–B is a DMA option that significantly reduces processor loading for long messages when acting as an IEEE–488 talker or listener. Software support consists of independent drivers that support up to eight IEC11–As and eight IEC11–Bs on a single VAX. Each of those interfaces may be on the same or different IEEE–488 buses up to the limits specified in IEEE Std. 488.

Refer to SPD #25.74.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $625 – $1560
Contact: Consult your local DIGITAL sales office (see Introduction).

IEX–VMS–Driver

Operating System: VMS
Keywords: • Device drivers/handlers

Memory required: 6K. Distribution media: RX01, TU58 DECtape II cartridge.

The IEX–VMS–Driver allows programs written in MACRO–32, VAX FORTRAN, or VAX BASIC to communicate through the IEU11–A with devices containing an IEC625-1 or IEEE Std. 488 interface. That communication is implemented through a choice of direct QIO calls or a set of subroutines callable from high-level languages.

The IEU11–A interface is a bit-parallel/byte-serial device that can perform transfers in either program interrupt or DMA (direct memory access) mode. The former is used for transferring commands and addresses; the latter is used for transferring data. DMA significantly reduces processor loading during the transfer of long data buffers.

The IEU11–A interface contains two independent IEC625–1/IEEE 488 bus controllers, also known as General Purpose Interface Buses (GPIB). Those two controllers may be connected to the same or to different IEC/IEEE buses. Up to 15 devices may be attached to one IEC/IEEE bus.

Release notes are provided for IEC11 users who wish to migrate their application programs to an IEV11.

Refer to SPD #26.30.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $300 – $975
Contact: Consult your local DIGITAL sales office (see Introduction).

IF–11/HDLC–X.25 Link-Level Software

Operating System: VMS
Keywords: • Device drivers/handlers • Networking
• Pre- and postprocessors • Process control

This software package consists of HDLC (X.25 level II) firmware and a device driver for the VMS, RSX, and IAS operating systems. The driver, in conjunction with the HDLC firmware, allows VAXs and PDPs to perform high-speed point-to-point synchronous communication. The driver allows supervisory and data information between VAX and PDP users and the remote end of the communications link through the HDLC firmware.

System software allows users to select frame sizes up to 1027 bytes a frame for custom communication applications.

A version of this product is available for the PDP–11 computer.

Price: $7500 – $10,000
Contact: David Lawton
(805) 963–9431
ACC
720 Santa Barbara Street
Santa Barbara, CA 93101

IF–11/X.25 Network Control and File Transfer Programs

Operating System: VMS
Keywords: • File transfer • Networking
• Pre- and postprocessors

These programs provide an easy-to-use file-transfer facility for users of the IF–11/X.25 front-end processors.

The File Transfer Program (FTP) can be invoked through a host operating system command interface and can be used in either interactive or noninteractive mode. The user command set supports remote directory access and file-listing capabilities for locating and identifying remote files. Both binary and text (ASCII) transfer modes are supported. For text-mode file transfers, the FTP will support embedded, implied, or FORTRAN carriage-control attributes.

The Network Control Program (NCP) provides access to the IF–11/X.25 front-end processor for multiple FTP users. Thus, applications programmers now have an easy interface for connecting up to 32 user application processes to other hosts on an X.25 packet-switched network.

The FTP and NCP are written in C language for easy portability to other user systems.

Price: Available upon request
Contact: Michael Seto
(805) 963–9431
ADVANCED COMPUTER COMMUNICATIONS
720 Santa Barbara Street
Santa Barbara, CA 93101

IF–11/X.25 Packet-Switched Network Firmware

Operating System: VMS
Keywords: • File transfer • Networking
• Pre- and postprocessors

This package contains firmware that implements the 1980 CCITT X.25 Recommendations for the Open System Interconnection Model layers 1, 2, and 3 and a device driver for ACC's IF–11/X.25 front-end processor. The firmware provides X.25 packet and link-level support for DIGITAL hosts to make and receive calls on a packet-switched network. The firmware supports 32 full-duplex switched virtual circuits and can be configured for DTE or DCE operation.

The multichannel device driver provides a command and control interface for data transfers to/from VAX/VMS applications, the IF–11/X.25, and the remote DTE or DCE. The driver uses the standard DIGITAL QIO commands to read/write data.

Users can also select a 256-byte packet option or an ADCCP frame-level protocol to facilitate communications lines with long transmission delays, such as satellite links.

A version of this product is available for the PDP–11 computer.

Price: $10,000
Contact: Michael S. Seto
(805) 963–9431
ADVANCED COMPUTER COMMUNICATIONS
720 Santa Barbara Street
Santa Barbara, CA 93101

IF–11/X.25 PLUS PAD Software and Firmware

Operating System: VMS
Keywords: • Networking • Pre- and postprocessors

This package contains firmware that implements the 1980 CCITT Recommendations X.25, X.3, X.28, and X.29 and a device driver for ACC's IF–11/X.25 PLUS front-end processor. The firmware provides packet assembly/disassembly functions for a DIGITAL host to be accessed by remote asynchronous terminals through an X.25 packet-switched network.

The firmware provides full screen editor functionality for up to 32 remote terminals accessing a DIGITAL host. Thus, remote terminals can run applications as if locally attached to the host. The firmware, in conjunction with the ACC IF–11/X.25 PLUS hardware, also can provide PAD support for locally attached terminals to make calls to the X.25 network.

A version of this product is available for the PDP–11 computer.

Price: $9000
Contact: Michael Seto
(805) 963–9431
ADVANCED COMPUTER COMMUNICATIONS
720 Santa Barbara Street
Santa Barbara, CA 93101

IMX700

Operating System: VMS
Keywords: • Data conversion • Electronic mail • Networking • Telecommunications

These 32-bit minicomputer-based store-and-forward message and data-handling systems use stored program techniques and advanced semiconductor technology to increase reliability while reducing physical size and power requirements. The systems can be equipped to interface with asynchronous and synchronous communications circuits operating at different speeds and codes and can be expanded to accommodate 512 circuits with speeds up to 56K bits/second.

The IMX700 system continually monitors its own operations, as well as the communications network and the remote terminals, ensuring that whenever an exceptional condition occurs, such as peripheral device failure, open communications circuit, or failure of a terminal to

respond, an alarm defining the failure is sent to the system operator. In addition, the system automatically generates a periodic status report listing exceptional conditions present in the system.

Included with the system is a wide range of supervisory commands, such as "HELP," which enables the operator to obtain assistance from the system in the form of a directory. The HELP command is best described as a quick reference operator manual.

Routing and network changes can be done easily by using the user-friendly on-line configuration. The IMX700-series global architecture supports multisystem network configurations.

Price: $150,000
Contact: John Phillips
(212) 594–8340
C & W INCOTEL, LTD.
Five Penn Plaza
New York, NY 10001

IP/TCP (Internet Protocol Transmission Control Program)

Operating System: EUNICE, ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Networking

IP/TCP is the newly adopted Department of Defense standard that provides a set of cooperative processes designed to allow two or more computer systems to communicate within given protocols. Users may also create protocols conforming to their own definitions, and communications may include file transfer, mail transfer, or virtual terminal services.

The TCP protocol allows concurrent communication between several systems, using one physical device, by automatically multiplexing user data. Unlike network protocols that are confined to the definition of the data transmission structure, IP/TCP has "skeleton" definitions for all levels of the system's interface.

IP/TCP is derived from the International Standards Organization's Open Systems Interconnection (ISO/OSI) Reference Model.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $15,000
Contact: Nancy Linde
(415) 962–7200
THE WOLLONGONG GROUP
1129 San Antonio Road
Palo Alto, CA 94303

KCT32

Operating System: VMS
Keywords: • Asynchronous communication • Debugging • Device drivers/handlers • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This software and firmware package provides VAX/VMS support of the KCT32 hardware communication option. VAX–11 KCT32 software, with the KCT32 firmware and KCT32 hardware, allows the user to implement custom communication applications.

Users can program the KCT32 communication lines for bit/byte synchronous or asynchronous transmission and reception, using the standard DIGITAL PDP–11 Instruction Set implemented with the DCT11 chip. This software, used with the KCT32 hardware and user-written communication application, allows the VAX/VMS host processor to perform high-speed multiline communication.

Prerequisite software includes the VAX/VMS operating system and VAX–11 RSX (if VAX/VMS is at the minimum of Version 4.0).

Refer to SPD #26.04.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $500
Contact: Consult your local DIGITAL sales office (see Introduction).

Kermit and CPMUG Grab Bag

Operating System: VMS
Keywords: • Programming tools • Source code control

This program contains a Kermit distribution package for reliable communications over terminal lines among PDP–11, VAX, CP/M–80–based micros, IBM PCs, DEC10s, DEC20s, IBM 370s, and/or Apples. Kermit comes from Columbia University and appears reliable. CP/M user group software (sources only, no binaries) is included.

For VAX users, an 8080 emulator and CP/M host for VAX/VMS on the Australian VAX SIG '82 DECUS tape are available through the Library, DECUS number V–SP–13, which allows the user to use the packages directly. A replacement for COMLIB in the RSX11M V4 BRU utility allows BRU to be used to already initialized disks under VMS.

No guarantees are made as to the completeness, usability, or quality of the programs on the tape. The material has not been checked or reviewed, and documentation may or may not be included. DECUS number 11–5P–55.

Restrictions: CPMUG files may or may not be complete. You will need Kermit or a similar package to move files to CP/M. Any binaries here are useless, and most are deleted.

Note: Some elements have only the HEX files. However, most items are in source.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

KMS11–BD/BE HDLC/BSC Framing Software

Operating System: VMS
Keywords: • Device drivers/handlers

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

The VAX KMS11–BD/BE HDLC/BISYNC (BSC) Framing Firmware consists of a VAX/VMS software driver and firmware for the KMS11–BD/BE. The VAX/VMS software driver and the KMS11–BD/BE software allow VAX/VMS users to build and implement custom or standard communication protocol without having to program the KMS11–BD/BE.

The KMS11–BD/BE firmware provides the HDLC or BISYNC (BSC) framing of the data, as well as the DMA between the KMS11–BD/BE and VAX host. That capability reduces the host of processor overhead associated with character interrupt devices. The VAX host is no longer interrupted on each character that is transmitted or received and does not have the software overhead associated with determining what to do with each character as it is received or transmitted. Rather, an interrupt is generated on a message transmitted or received basis, and processing then takes place on the entire message.

The driver is the interface that allows the user to transmit or receive command, control, or message data among VAX/VMS users, the KMS11–BD/BE firmware, and the remote end of the communication line. The VAX/VMS software driver for the KMS11–BD/BE provides the interface that allows the VAX/VMS user to send or receive messages for various protocols in the VAX/VMS host. Those messages are then sent or received by means of DMA from the KMS11–BD/BE HDLC/BISYNC Framing Software.

The purpose of the KMS11–BD/BE firmware is to provide the basic HDLC or BISYNC line framing of the messages received or to be transmitted from the VAX host using a DA device. A host application program, not supplied with this software, must provide the protocol line control. That program may be written in a higher-level language supported on VMS systems.

Refer to SPD #26.55.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $3000
Contact: Consult your local DIGITAL sales office (see Introduction).

KMS11–BD/BE X.25 Link-Level Software

Operating System: VMS
Keywords: • Device drivers/handlers • Networking • Pre- and postprocessors • Telecommunications

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This package consists of X.25 Level 2 firmware and a VAX/VMS device driver for the KMS11–BD/BE X.25 Link-Level Software. The driver, in conjunction with the X.25 Level 2 firmware and KMS11–BD/BE hardware, allows a VAX/VMS processor to perform high-speed multiline synchronous communication in a point-to-point environment. The driver allows command, control, and data information to/from VAX/VMS users, KMS11–BD/BE firmware, and the remote end of a communication line. The driver is full-duplex and maintains internal queues.

Refer to SPD #25.80.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $6000 – $6600
Contact: Consult your local DIGITAL sales office (see Introduction).

LAT–11

Operating System: VMS
Keywords: • Asynchronous communication • Networking

Distribution media: RX02, TU58 DECtape II cartridge.

LAT–11 enables a properly configured PDP–11 system to be used as a terminal server on the Ethernet local area network. The PDP–11 configuration, referred to as a LAT–11 server, communicates over the Ethernet with host systems (nodes) that support the LAT (Local Area Transport) host protocol. Users at terminals connected to the LAT–11 server establish virtual circuits (sessions) with nodes; therefore, terminal input/output to/from a node appears essentially identical to that of a terminal connected to the node through a direct EIA asynchronous line. However, unlike direct terminal connections, the LAT–11 server enables users to easily access all nodes on an Ethernet that run LAT.

Refer to SPD #15.32.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $3300
Contact: Consult your local DIGITAL sales office (see Introduction).

Linkware

Operating System: VMS
Keywords: • Down-line loading • File management • File transfer

This file-server application and corresponding PC software allows you to integrate your PCs and your VAX into a single information-resource environment. While running Linkware, a PC user strikes a function key to be connected as an on-line terminal to the VAX. Linkware automatically emulates a VT100-type terminal. By striking the function key again, the user is disconnected from the VAX as an on-line terminal and returns directly to Linkware. Linkware's PC interface can also be embedded in PC applications. Thus, your PC can be a front-end processor for a data entry system.

Linkware's transformation facility converts standard VMS files into the standard PC formats. PC files can be stored on the VAX as either standard files or in the required PC format. Users can easily create additional transformation templates for new software. Information on the VAX is easily down-line loaded to your PC and transformed into the required format. Linkware's PC interface is a full-screen, on-line, menu-driven facility with integrated help facilities.

With Linkware, binary and text data can be transferred and shared with PC users and with terminal users. PC files can be stored on the VAX for archival purposes or to share with other users. Commonly used PC applications can be stored on the VAX and loaded by PC users in executable form.

Through menus, users can get or send files and view directories for available files, as well as perform normal file operations, such as purge and rename. Linkware also performs error handling. An audit trail creates a log of each file transfer and can be used for analysis, control, and chargeback purposes. Linkware is written in C and uses standard VMS sequential and indexed files.

Price: $5000 – $12,000

Contact: James X. Wilson, Vice President, Sales and Marketing
(617) 894–9330
LINKWARE CORP
77 Rumford Avenue
Waltham, MA 02154

M–NET

Operating System: VMS

Keywords: • File transfer • Networking

M–NET supports network communications between RSX environments linked by hardware ranging from a simple serial asynchronous link to a high-speed parallel DMA link. M–NET features include transparent file transfer between local and remote computers, solicited and unsolicited intertask communication, and remote terminal access to any approved processor in a network.

A version of this product is available for the PDP–11 computer.

Price: £500 – £1500
Contact: K. E. Archer
0296 32023
S–COM COMPUTER SYSTEMS ENGINEERS LTD.
Tower House, High Street
Aylesbury, Bucks
United Kingdom

MAILIST: A Program to Develop a Mailing List

Operating System: VMS
Keywords: • Mailing lists

This command procedure helps a system manager create a current mailing list of users so they can receive messages. MAILIST was developed in conjunction with the VMS MAIL utility to force users to read important messages that they would otherwise ignore. This procedure can be invoked from the system manager's account or from the user's account, as a normal command procedure. Additionally, the last two lines of the command procedure put the current user list in a place where any user can review it. DECUS number VAX–107.

Price: $5 – $225
Contact: DECUS (see Introduction)

Message Router for VMS

Operating System: VMS
Keywords: • File transfer • Networking

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This store-and-forward message transport system optimizes message delivery in a DECnet Phase III or Phase IV network and runs on a properly configured VAX/VMS operating system that supports a DECnet Phase III or Phase IV network. Message Router for VMS supports the existing Standards for Network Protocol, Interface, and Formatting being developed for Message Handling Systems by the National Bureau of Standards (NBS). The software logs the progress of messages in the network and informs the sending application if the message is undeliverable.

Message Router for VMS requires application programs, called User Agents or Gateways, that will format and display messages, interact with Message Router for VMS in a "posting protocol" to send messages or in a "delivery protocol" to receive messages, convert a received message from Message Router for VMS standard format into the required application format, and convert a sending application format to the Message Router standard format.

Message Router for VMS documentation helps users develop their own User Agents/Gateways. In addition, the VMSMAIL Gateway is included with the Message Router so that users can access the VMS Personal Mail Utility.

Refer to SPD #26.33.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $2200
Contact: Consult your local DIGITAL sales office (see Introduction).

MICOMM (DIGITAL to Microtek MICE Communications Utility)

Operating System: VMS
Keywords: • Down-line loading • File transfer • Telecommunications

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

A general utility for data transmission between VAX and PDP–11 computers and Microtek MICE systems, MICOMM uses standard RS–232 communications through local cable or switched telephone networks. The MICOMM package facilitates the use of cross-assemblers and cross-compilers operating on DIGITAL systems. Applications programs may be assembled or compiled on a DIGITAL system and the resulting binaries transmitted to a MICE for testing. MICOMM provides the capabilities to down-load Intel and Tektronix hexadecimal formats as well as Virtual Systems LDA formats to a MICE module.

MICOMM also allows for direct communications with a MICE through a transparency mode, in which data is sent and received between the MICE and your DIGITAL terminal. This mode thus allows you to issue all the MICE commands from your DIGITAL terminal (including Execution, Trace, Halt, Assemble, and so on) and to display microprocessor memory and register contents.

MICOMM is distributed under a perpetual license. Pricing includes two user's manuals and a 1-year software maintenance/update service. Additional manuals may be purchased by special order.

A version of this product is available for the PDP–11 computer.

Price: $250 – $500
Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

MIMIX:CP/M

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Development tools • File transfer • Networking

MIMIX:CP/M allows the CP/M operating system and CP/M–compatible applications to run as "guests" in the UNIX* system environment. MIMIX:CP/M supports the execution of Z80 programs, using two approaches — software emulation, which uses a Z80 processor written in C and assembler, and hardware emulation, which uses a "real" Z80 processor. The MIMIX:CP/M package also includes a communications feature that allows a UNIX* system to access disks attached to a CP/M processor.

Performance of the emulator depends on the speed of the host processor, type of CP/M application being emulated, and the availability of Z80 hardware, such as the MIMIX:C–Board. The menu interface enables users to manage the operation of CP/M programs in a simple-to-use format. The enhanced CP/M system provides each user with eight CP/M disk drives, with CP/M files storing up to 8MB a drive. Use of a remote disk allows UNIX* users to transfer files to/from CP/M disks written in any CP/M format. CP/M data can be integrated into the UNIX* file system, and CP/M runs concurrently with UNIX* programs. Cross-development is facilitated; Z80 development is permitted on UNIX* systems.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $495
Contact: Ray Norberte
(213) 598–7746
TOUCHSTONE SOFTWARE CORP.
909 Electric Avenue, Suite 207
Seal Beach, CA 90740

MS1NET™

Operating System: VMS
Keywords: • Networking • Telecommunications

Memory required: 100KB. Distribution medium: magnetic tape.

This communications software product, written in FORTRAN–77, is a module of McAuto System 1. MS1NET operates as a HASP protocol workstation on any of McAuto's JES (Job Entry Subsystem) complexes or CDC CYBER complexes through RBF (Remote Batch Facility). The system includes a high-level language interface as well as a DCL command-level interface.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

MUX200/VAX

Operating System: VMS
Keywords: • Data conversion • File management • File transfer • Networking

Distribution media: RX01, TU58 DECtape II cartridge.

This VAX-based package provides communication with a CDC 6000, CYBER series, or other host computer systems capable of using 200 UT Mode 4A communications protocol. The product supports a single switched or dedicated leased line 2- or 4-wire common carrier facility at speeds up to 9600 bps. Any VAX interactive terminal can be used to control remote job entry or to communicate at command level with the host system. Input files can be sent from and output files received onto any VAX-supported mass storage, unit record, or terminal device.

MUX200/VAX enables several users to communicate simultaneously with a host system over a single line. The VAX/VMS system, while using a single physical drop, appears to the host as a number of multidrops and terminals on the circuit. The MUX200/VAX system supports up to 16 simultaneous users. However, that may be limited to a lower figure by host hardware or software.

Refer to SPD #25.02.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $5800
Contact: Consult your local DIGITAL sales office (see Introduction).

NCNET

Operating System: VMS
Keywords: • CAD/CAM • Manufacturing • Networking • Numerical control

This cost-effective communications network allows distribution of machine tool manufacturing data between the machine tool controller and the host computer. NCNET may be used with any of RWT's NCPRO systems or another compatible computer and your NC machine tools. NCNET puts the ability to send or receive manufacturing data at your operator's fingertips and improves manufacturing performance by:

- Eliminating storage, retrieval, and distribution of punched NC tapes
- Providing an immediately displayed log of transactions with the date and time

- Permitting segmenting of long programs that will not fit into control memory
- Allowing you to program parts on your NCPRO station without interruption when manufacturing data is transmitted
- Ensuring that a program will be used on the correct machine
- Removing the possibility of running obsolete tapes
- Building your network on a single, service-free, shielded wire at distances up to three miles
- Easily expanding to accept your new machine tools

Using advanced communications hardware, NCNET provides a tool to control the daily NC production schedule. Additional station and controller interfaces may be added to network additional machine tools.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $7000
Contact: Cole Oehler
(312) 952–1710
RWT CORP.
415 West Golf Road, Suite 28
Arlington Heights, IL 60005

NEXUS

Operating System: VMS
Keywords: • Data conversion • Diagnostics • Telecommunications

Distribution medium: magnetic tape.

This menu-driven communications software receives and stores data transmitted from Telxon Data Terminals onto the host computer. Data is transmitted by phone line through a 202–S dataset. NEXUS receives the transmitted data, monitors for errors, records valid data, and sends tones signifying valid or erroneous transmissions. This set of VAX–11 BASIC programs receives multiple-line transmissions and records each transmission in a separate file for further processing. The user can create or delete receive processes and is limited only by system resources.

Price: $3000
Contact: Patricia Boittiaux
(403) 236–6126
CANALTA
7100 44th Street, S.E.
Calgary, Alberta T2H 1X2
Canada

NOTIFY

Operating System: VMS
Keywords: • Operations • Software utilities

This utility sends a single line of text to one or more users on the system and is intended as a more flexible substitute for REQUEST and REPLY during user-to-user communication. No privileges are required. The user name can be specified ambiguously; for example, JA could match all users whose user names begin with JA. The utility comes with an addition to the VMS help library. DECUS number V–SP–30.

Note: Release notes are distributed with each tape.

Price: $5 – $225
Contact: DECUS (see Introduction)

NTR

Operating System: VMS
Keywords: • Data conversion • File management
• File transfer • Networking

Distribution media: RX01, TU58 DECtape II cartridge.

VAX NTR allows a VAX/VMS system to communicate with a UNIVAC 1100 series or other host computer systems capable of using UNIVAC NTR protocol. The software operates under the VAX/VMS operating system to permit batch input/output. Start-up, shut-down, and host-queue interrogation by the emulator can be controlled from any one terminal — the control terminal — connected to the VAX/VMS operating system. VAX NTR communicates with the host over a switched or nonswitched 2- or 4-wire line at speeds up to 9600 baud.

Refer to SPD #25.68.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $3600 – $6100
Contact: Consult your local DIGITAL sales office (see Introduction).

NU–11/XNS–TCP–IP

Operating System: ULTRIX–32, VMS
Keywords: • Networking • Telecommunications

This comprehensive host-resident network communications protocol package provides concurrent support for Xerox NS and various DOD protocols. The package supports XNS Courier at the Presentation Layer, DOD TCP protocol at the Transport Layer, and DOD Internet Protocol at the Newwork Layer.

In addition to the communications utility, the package includes a linkable run-time library, providing user interfaces at each protocol layer. The product can be used with the ACCES: IF–11/Ethernet as well as Thernet Controllers from other vendors.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $4500
Contact: ACC
(408) 425–0397
ACC
720 Santa Barbara Street
Santa Barbara, CA 93101

OS/NET (Local Area Networking)

Operating System: ULTRIX–32, VMS
Keywords: • Device drivers/handlers • Networking

This module provides the necessary networking interface and device driver software to implement Local Area Networking on several types of DIGITAL computers using DESNET, Destek's high-performance, low-cost Local Area Network. OS/NET uses OS/RT, Destek's real-time, multitasking operating system kernel, to allow an OS/RT application "task" to communicate over the DESNET network. The network uses the IPC (Inter Process Communications) functions of OS/RT as if it were operating on a single machine. OS/NET transparently routes IPC messages to any computer on the network. OS/NET can be applied to any business or industrial application that is distributed.

A version of this product is available for the PDP–11 computer.

Price: $400 – $2000
Contact: Dennis Rieger
(408) 737–7211
THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

PATHWAY™

Operating System: VMS
Keywords: • Data base management • File management • Networking

This software permits DECnet/VAX, DECnet/11M, and DECnet/11M+ users to select the Local Area Network (LAN) topology that meets their ongoing performance, topology, and maintenance requirements, independent of higher-level DECnet protocols. Each of the PATHWAY products — ETHERWAY,™ RINGWAY,™ and BROADWAY™ — is designed to run on a specific LAN medium. With PATHWAY, users can build a network that combines Ethernet, ring, and broadband network technology into a single DECnet network. PATHWAY software, when used in conjunction with the appropriate LAN communications controller hardware, can provide full Phase IV DECnet user data communications service and full Phase III DECnet logical connectivity, all without need of intermediate-node message routing.

A version of this product is available for the PDP–11 computer.

Price: $2500 +

Contact: Leonard Bargellini
(617) 443–7311
TECHNOLOGY CONCEPTS, INC.
Old County Road
Sudbury, MA 01776

PC–102

Operating System: MicroVMS, ULTRIX–32, ULTRIX–32m, VMS

Keywords: • Telecommunications

PC–100 turns a PC into a full-featured VT100/52 terminal. VT screen emulation includes underlining, reverse video, blinking, and boldface attributes. Full keyboard and keypad emulation, including special modes, are included; 132-column support is optional.

PC–102 adds VT102 local printer support and bidirectional file transfer to the PC–100 features. Ten user-definable 64-character softkeys are included. Ten program script keys allow setup and execution of 1-keystroke control functions, such as autoconnection with TELENET. Local printing is controlled by keyboard and application programs. XON/XOFF and Pause/Kick file transfer protocols are included for operation with full- and half-duplex systems, respectively.

PC–102 supports baud rates from 300 to 9600 by way of direct or modem connection and is compatible with such VT applications as EDT, KED, WORD–11, ALL–IN–1, DECalc, TECO, UNIX,* and vi.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $89 – $139

Contact: Robert Larsen
(612) 944–0593
GENERAL MICRO SYSTEMS
6440 Flying Cloud Drive, Suite 205
Eden Prairie, MN 55344

PCL

Operating System: VMS

Keywords: • Device drivers/handlers • File transfer • Networking • Telecommunications

Distribution media: RX01, TU58 DECtape II cartridge.

This optional VAX/VMS software product supports interprocessor communications through the PCL11 hardware option. The VAX PCL driver provides a message-oriented data communications capability between user software located in up to 16 processors linked into a local area network by the PCL11 multidropped parallel bus. A user-oriented message of variable length can be directed to any single receiving node

during each transmission transaction. Both VAX–11 and PDP–11 processors can be mixed on the same PCL11 local network. The VAX PCL driver is compatible with the PCL–11M driver, Version 2.0 and above, for the RSX–11M operating system.

The VAX PCL driver also supports interprocessor communications through the DECnet–VAX network software package. The PCL11 hardware and VAX PCL driver will support all the features of DECnet–VAX except down-line loading. Mixed networks of VAX–11 and RSX–11M DECnet nodes may be implemented, provided that the RSX–11M DECnet is not earlier than Version 3.1. VAX PCL is provided as source code only.

Refer to SPD #26.23.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $1710 – $4280
Contact: Consult your local DIGITAL sales office (see Introduction).

PCL11–B DECnet Driver

Operating System: VMS
Keywords: • Device drivers/handlers • File transfer • Networking • Telecommunications

This product, developed by TRW, provides support for all DECnet Phase III capabilities over the PCL11–B bus link, PCL11–B DECnet links among VAX/VMS systems and to RSX–11M systems, and full advantage of DECnet Phase III facilities taken over your PCL11–B. The VAX/VMS PCL11–B DECnet device driver supports DECnet Phase III on the PCL11–B interprocessor UNIBUS link. Up to 16 VAX/VMS and RSX–11M systems may be connected by the PCL11–B. A PCL11–B DECnet device driver for RSX–11M is supplied with the DECnet–11M software from DIGITAL. This product requires a physical PCL11–B and a valid VAX/DECnet license from DIGITAL.

Price: $2000
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

PHONELINK™

Operating System: VMS
Keywords: • Diagnostics • File transfer • Telecommunications

PHONELINK allows DIGITAL minicomputers to communicate directly with a PC100 (Rainbow) system through a modem or an RS232 connection. The system additionally provides direct communications between PC100 systems. Processors forming the communications link must be running the PHONELINK software on the resident operating

system. For additional information on PHONELINK for the PC100 systems, consult SPD #A1.54.00. Communication may be initiated from either a microcomputer or a minicomputer, except for systems running RSTS/E. PHONELINK running under an RSTS/E operating system cannot initiate a file transfer.

PHONELINK can support data transfers at rates of up to 19.6 kilobaud. The package incorporates error detection and automatic retry for error-free and convenient transfers of binary and ASCII data.

DIGITAL distributes this software product under license from Virtual Microsystems, Inc.

Refer to SPD #A1.74.xx when requesting further information on this product from your local DIGITAL sales office.

PHONELINK™ is a trademark of Virtual Microsystems, Inc.

A version of this product is available for the PDP–11 computer.

Price: $900 – $1200
Contact: Consult your local DIGITAL sales office (see Introduction).

poly-COM™

Operating System: VMS
Keywords: • Asynchronous communication • File transfer • Networking • Personal computing

Distribution medium: RX50.

Previously known as poly-XFR™ CP/M® Communications, the poly-COM package for the Rainbow 100 features binary/ASCII file transfers between DIGITAL's Rainbow 100 CP/M®–86/80 local system or MS™–DOS local system and a host system. The name poly-COM has been changed to reflect the new CP/M–86/80 Version 2.0 operating system upgrade and the MS–DOS operating system addition to this product. The functionality of this product is the same. The host systems must run the poly-XFR CP/M communications package in order to communicate with poly-COM running on the Rainbow 100.

The package has time-out and error-detection features that ensure the integrity of the transferred data. The software runs up to 9600 bps in a local environment and uses full-duplex modems for remote data transfer.

The package enables the user to transfer, store, and retrieve files; use host peripherals; and act as terminal to the host. The user can access either system to do program development, transfer data between systems, or toggle the local printer on or off.

The two main components of poly-COM are software that runs on the host and software that runs on the local system. The poly-COM package is ideal for environments that use distributed development and/or personal computing systems and that need to share data, programs, or peripherals among those systems.

DIGITAL distributes this software product under license from Polygon Associates, Inc.

Refer to SPD #A3.23.xx when requesting further information on this product from your local DIGITAL sales office.

poly-COM™ and poly-XFR™ are trademarks of Polygon Associates, Inc. MS–DOS™ is a trademark of Microsoft Corp. CP/M® is a registered trademark of Digital Research, Inc.

A version of this product is available for the PDP–11 computer.

Price: $200
Contact: Consult your local DIGITAL sales office (see Introduction).

Professional Host Communications

Operating System: VMS
Keywords: • File transfer • Networking • Telecommunications
Distribution media: RX01, TU58 DECtape II cartridge.

This software for transferring files between a Professional 300 and an RSX–11M/11M–PLUS, or VAX/VMS host system is initiated by a Professional running PRO/Communications in terminal-emulation mode. After the Professional Host Communications facility is started, the Professional switches from terminal-emulation to file-transfer mode. The files can then be transferred between the Professional and the host system.

Refer to SPD #30.29.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $135
Contact: Consult your local DIGITAL sales office (see Introduction).

PSI (Packetnet System Interface) and PSI Access

Operating System: MicroVMS, VMS
Keywords: • Networking • Telecommunications
Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

The VAX PSI products allow suitably configured VMS systems to connect to and/or access Packet Switching Data Networks (PSDNs) conforming to CCITT recommendation X.25 (June 1980). VAX PSI and a subset, VAX PSI Access, permit process-to-process and terminal communications between a VAX and remote Data Terminal Equipment (DTE) in a PSDN supporting the X.25 interface protocol.

Both VAX PSI and VAX PSI Access support access for VMS user programs written in VAX MACRO and native-mode high-level languages, such as VAX FORTRAN. VAX PSI and PSI Access are components of the Packnet Systems Interface (PSI) software. The interfaces implemented in both products are fully compatible with interfaces of other VMS products, making PSI and PSI Access mutually exclusive; thus, they cannot operate concurrently on the same system.

Refer to SPD #25.40.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $300 – $4950
Contact: Consult your local DIGITAL sales office (see Introduction).

PSS (Performance Simulation System)

Operating System: VMS
Keywords: • Disk utilities • Operations • Security • Simulation

Distribution media: 9-track 1600 bpi magnetic tape, cassette.

The PSS system allows a user to record one or more terminal sessions, transparent to the application running on the terminal. The recorded terminal sessions can then be played back through pseudoterminals.

PSS provides three main facilities — performance testing, application reliability, and security (monitor terminal ports connected to modems).

DIGITAL layered products such as TDMS and FMS can be used with PSS.

Price: $1995 – $4995
Contact: Marie C. Murphy
(201) 798–6400
ADVANCED SYSTEMS CONCEPTS, INC.
22 Hudson Place
Hoboken, NJ 07030

Q–NET — Interface to DECnet

Operating System: MicroVMS, VMS
Keywords: • Asynchronous communication • File transfer • Networking

Distribution medium: 1600 bpi magnetic tape.

Q–NET uses the GOULD™/DEC Parallel Data Link to connect any Concept 32™–series computer running MPX™ 2.x or 3.x and any PDP–11, LSI–11, or VAX computer running RSX or VMS and DECnet. The DIGITAL computer serves as a gateway that makes the Gould computer fully accessible to DECnet and provides full access to DECnet capabilities. Terminals on any DIGITAL or Gould computers can log on any other DIGITAL or Gould computer in the network.

The GOULD/DEC Data Link includes peripheral sharing, whereby the DIGITAL computer has access to Gould peripherals and the Gould computer has access to DIGITAL peripherals. Access of peripherals on the other machine is transparent; they appear to the user as if connected to the local computer.

The Data Link also allows Gould files to be accessed by local or remote users in the same way as DIGITAL files, and the contents are automatically translated. Thus, DECnet can transfer files between any two disks in the network.

Another feature enables any Gould or DIGITAL computers in the network to exchange data by using DECnet calls. Tasks in the Gould and DIGITAL computer connected by the parallel link can pass data directly with simple high-speed read/write calls.

The DIGITAL gateway computer can be a separate DIGITAL mainframe or can be a rack-mounted unit in the Gould cabinet.

The link hardware consists of a Gould HSD Interface, a control logic card, and a DIGITAL Q-bus- or UNIBUS-compatible DMA Interface. Cable lengths up to 250 feet are supported with the standard drivers. Optional drivers allow cable lengths up to 1000 feet. Raw transfer rates are up to 700KB for Q-bus and 1000KB for UNIBUS.

GOULD,™ Concept 32,™ and MPX™ are trademarks of Gould Computer Systems Division, Ft. Lauderdale, FL.

A version of this product is available for the PDP–11 computer.

Price: $20,450 – $39,750
Contact: Wayne R. Fox
(615) 482–6649
SCIENCE APPLICATIONS INTERNATIONAL CORP.
152 Fairbanks Road
Oak Ridge, TN 37830

RAMdriver

Operating System: VMS
Keywords: • Development tools • Device drivers/handlers • Disk utilities

The RAMdriver is a pseudo–disk driver running in physical memory under VAX/VMS. By initializing the "RAM disk" as a Files–11 device, data files and program images can be stored for speedy access. The RAM device appears as an extra disk drive. RAMdriver is completely transparent to all programs and utilities and provides all the facilities of a regular disk.

RAMdriver eliminates the physical delay times associated with using a regular disk drive. Transfers happen at "memory cycle time" speed without UNIBUS or MASSBUS contention to consider. Many applications have increased performance up to five times when run with RAMdriver.

Price: $495
Contact: Arthur Cacossa
(212) 425–0200
PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

REFORMATTER™ Conversion Software: RT–11 ↔ CP/M®

Operating System: VMS
Keywords: • Data conversion • File transfer • Software utilities

This version of the software reads and writes CP/M single-density diskettes and enables RT–11 users to exchange files on 8″ floppy diskette with CP/M equipment. REFORMATTER provides facilities for CP/M file reorganization and maintenance. Users can list the CP/M directory with file statistics, delete or rename CP/M files, change CP/M user numbers, dump or display CP/M files, and examine CP/M diskette usage. A wildcard feature provides for single-command transfer of several files.

CP/M® is a registered trademark of Digital Research.

A version of this product is available for the PDP–11 computer.

Price: $350
Contact: Oscar Rosenbloom
(415) 324–9114
MICROTECH EXPORTS, INC.
467 Hamilton Avenue
Palo Alto, CA 94301

RFX–11 (Remote File Transfer and Virtual Terminal Facility)

Operating System: VMS
Keywords: • File transfer • Networking • Telecommunications

RFX–11 transfers any text or binary file from one DIGITAL computer to another over any serial asynchronous line, dial-up or dedicated. Using data-compression methods to reduce transmission time up to 50% or more, RFX can operate at speeds up to 9600 baud on any terminal port. RFX uses simple PIP–type commands with full wildcard support. HELP files are included.

The RFX Virtual Terminal mode lets you talk with any remote computer running any operating system. Your home computer can be a VAX, PDP–11, LSI–11, or PRO–350.

Optional cross–operating system support is available for File Transfer mode to allow transfers among RSX, RT, VMS, and P/OS systems. RFX can also down-line load its support task to a remote system so you can fully install RFX without a trip to the remote site.

RFX also provides security keys, a continuous transfer status display, and support for Autodial. RFX is very efficient, using less than 5K of memory. The remote task uses less than 3.3K. Licensing is for the central site (the one with the command-line interface), with unlimited remote sites included.

A version of this product is available for the PDP–11 computer.

Price: $675 – $4975
Contact: Ross Amann
(212) 695–5001
RGTI SYSTEMS SOFTWARE
1 Penn Plaza, Suite 4835
New York, NY 10119

RGS

Operating System: VMS
Keywords: • Device drivers/handlers • Graphics • Interpreters • Software utilities

IMLAC Series II and 1600 IID terminals are supported by a 2-part software package. The first part, terminal-resident firmware, provides the user with communications handling, display list creation and manipulation, local device handling, and display production and control. The second part, a general-purpose interactive graphics subroutine library provided by IMLAC, resides in the host computer. The library of FORTRAN-callable subroutines, supplied on 9-track magnetic tape, has extensive interactive facilities for reporting and interpreting events that occur at the terminal. RGS is available for most popular host computers.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: John DesJardins
(617) 449–4600 ext. 218
IMLAC CORP.
150 A Street
Needham, MA 02194

SNA/COMBOARD™

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers • Networking

COMBOARD/SNA is a unique drop-in front-end communications system that allows DIGITAL UNIBUS VAX computers using VMS to access IBM centrals in SNA networks. COMBOARD/SNA causes the DIGITAL host to appear to the IBM/SNA network as a type-2 physical unit (PU). Software Results supplies two logical unit (LU) emulators. LU Type 1 supports SNA batch communications such as provided by 3770 batch stations. LU Type 2 allows a VT100–compatible terminal to emulate an IBM 3270 terminal. COMBOARD/SNA is available in three models according to transmission speed.

Price: $18,000 – $32,800
Contact: Bill Martin
(800) 772–3282
SOFTWARE RESULTS CORP.
2887 Silver Drive
Columbus, OH 43211

SPOCNET (Simultaneous Process-Oriented Communications Network)

Operating System: VMS
Keywords: • File transfer • Networking • Operating systems

This network enables two or more concurrently running processes to exchange information. Having processes communicate with one another allows the user to develop applications that are decentralized, portable, and secure.

The conversation among processes is implemented through a standard set of routines that allow a process to build communication links with other processes. The ability to create those links gives the user an intranetwork capability for decentralizing applications and increasing overall throughput.

Price: Available upon request
Contact: Gary M. Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

TANGO

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • File transfer • Networking • Personal computing • Telecommunications

This communication software connects IBM, AT&T, and compatible PCs with UNIX*-based computers. MS–DOS commands and programs on PCs are executed under control of UNIX* hosts. File transfer uses standard error-correction protocols with automatic conversion

between UNIX* and MS–DOS file formats. Terminal emulation of DIGITAL, IBM, and Tektronix (full graphics capabilities) terminals are selectable from the UNIX* host.

Tango uses a standard RS–232 serial port on the PC and connects to the UNIX* computer through a modem or direct connection.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $195 – $295
Contact: Jeff E. Spencer
(313) 665–8778
COMPUTERIZED OFFICE SERVICES INC.
313 North First Street
Ann Arbor, MI 48103

Tektronix 8001/8002/8550 Communication Package

Operating System: VMS
Keywords: • File management • File transfer • Microprocessor development

Memory required: 8KW.

This MACRO–11 routine handles intersystem communications between PDP–11/VAX hosts and the Tektronix Micro Processor Development Lab stations. The program may be conditionally assembled for RT–11, RSTS/E, or RSX operating systems. Both the formatted and unformatted transfer modes, described in the *Tektronix 8001/8002/8550 Users Manual*, are supported. Formatted transfers use the Standard Tektronix Hexadecimal Format (TEKHEX). System interconnection is made through the standard RS–232–C terminal interface port on the PDP–11 or VAX host.

The *Tektronix 8001/8002/8550 Microprocessor Development Lab Users Guide* is available through your Tektronix sales representative.

Documentation is on magnetic media. DECUS number 11–SP–24.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

TeleAccess™ Interactive Telephone Voice Application System

Operating System: VMS
Keywords: • Banking • Development tools • Robotics • Telecommunications

This product facilitates the creation of interactive telephone speech synthesis applications, using DIGITAL's DECtalk unit. A set of user-interface routines control the DECtalk unit and a customizable Customer Balance Reporting application. The TeleAccess library contains

routines to enable/disable keypad, read keypad keys, answer/dial-out and other telephone functions, and write speech records. Device time-out and DECtalk escape-sequence recognition are handled by the TAC library. DECtalk telephone and speech facilities can be manipulated by the TAC routines. Programs access the TAC routines, using CALL as a verb or as a function. TAC returns standard VMS 32-bit status/message codes. TAC can be used by native-mode VMS languages that support the CALL facility.

The Customer Account Balance Inquiry system (CAB) is a customizable application that uses the TAC routine library to enable customers to obtain their opening and trial balances. CAB allocates a DECtalk unit and waits for a user to call. CAB answers the telephone, introduces itself, and allows the user to enter a user ID and a passcode. CAB uses DIGITAL's Common Data Dictionary to facilitate data base definition and provides an upward growth path to DIGITAL's VAX Information Architecture. CAB accesses balance information and relays it to the customer, using an intelligible voice. CAB is distributed in source format and provides the interactive voice applications.

TeleAccess is sold with two weeks of ASCII consulting.

Price: $25,000

Contact: Marie C. Murphy
(201) 798–6400
ADVANCED SYSTEMS CONCEPTS, INC.
22 Hudson Place
Hoboken, NJ 07030

TELEPORT II

Operating System: VMS

Keywords: • File transfer • Telecommunications

TELEPORT II is a micro-to-mainframe connection, responsible for local microcomputer terminal emulation and the transfer of information between local and remote computer systems. TELEPORT II communicates micro to mainframe, mainframe to micro, and micro to micro. Communication occurs with guaranteed error-free reliability over all paths, due to a sophisticated error-detection system known as CRC redundancy checking.

TELEPORT II is easy to use, featuring on-line help and self-explanatory menus. Command sequences can be stored on disk and automatically executed at a later time. Micro and mainframe server mode provides fully automatic file transfers and logout, once initial connection is made to a remote system. TELEPORT II stores multiple telephone numbers, baud rates, protocols, information on remote systems, and terminal interaction in memory and allows the user to scroll through information that is no longer on the screen. Dialing can be automatic or manual. TELEPORT II also offers tab conversion, control character processing, full/half-duplex, multiple protocols, upper/lowercase, and terminal speeds up to 9600 baud.

TELEPORT II can be used in micro-to-micro communication, in micro-to-micro disk conversion, in off-line data entry, in data up-loading and down-loading, and in software distribution. TELEPORT II is written in C and is distributed on reel tape for mainframes and diskettes for micros.

Price: $5000
Contact: John Enyedy
(408) 257–7700
NATIONAL INFORMATION SYSTEMS
20370 Town Center Lane, Suite 130
Cupertino, CA 95014

Tenny Electronic Bulletin Board Message Mailing Facility

Operating System: VMS
Keywords: • Electronic mail • Mailing lists • Networking

Memory required: 12KB.

The board facility allows mail to be sent to user and group accounts. All mail is password protected and clearance coded for total protection.

Mail can be sent to any user with or without a dedicated terminal, to a group (sales, owners, and so on), or to all users for general announcement messages. When the group option is used, the mail can be dated to autodelete in a user-allotted amount of time. Messages can also be directed to any printer for hard copy and then deleted as desired.

A maintenance utility is provided to maintain the group and user accounts as well as an update program to autodelete group messages that have passed their "days to display." DECUS number 11–608.

Restrictions: An ISAM file (single key) must be used.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

TLX/VAX Telex Utility

Operating System: MicroVMS, VMS
Keywords: • Electronic mail • File transfer • Networking • Telecommunications

TLX/VAX provides a user-friendly interface to the RCA Global TELEXTRA service. Simple DCL commands submit telex messages files to the TELEXTRA store-and-forward service and inquire and retrieve telex mail from TELEXTRA. Hayes-compatible autodial modem control is included.

A batch procedure is also provided that automatically dials TELEX-TRA, checks for and retrieves any waiting mail, and sends VAX mail messages to notify the system manager that a telex has been received. This batch procedure can be configured to run without operator intervention.

Price: $1200

Contact: Meryl Canter Lewis
(212) 695–5001
RGTI SYSTEMS SOFTWARE
1 Penn Plaza, Suite 4835
New York, NY 10119

TSU05 Device Driver

Operating System: VMS

Keywords: • Device drivers/handlers • Diagnostics

Distribution medium: 9-track 1600 bpi magnetic tape.

The VAX–11 TSU05 Device Driver provides full support for the TSU05 magnetic tape interface and drive on VAX–11/730 and 750 processors and full error-logging support as well. This drive can take advantage of the speed provided by the TSU05 subsystem, which consists of a TSU05 controller board and a TS05 tape drive. The TS05 drive operates in either 25 ips or 100 ips streaming mode.

Default operation is to 25 ips read and write speeds; 100 ips as a copy facility can be incorporated by the user into an application so that the processor is totally committed to the task. However, this high-speed facility is unsupported and is provided without any warranty.

The TSU05 subsystem is compatible with the TS11/TU80 devices for most operations, the main differences being in the number of device registers. The TSU05 software allows the full set of device registers to be logged when detecting device/tape errors. A special error-reporting program supplied as part of the software package will report only TSU05 errors; the standard VMS error-reporting program (SYE) is used for all other types of errors.

The TSU05 subsystem supports only VAX/VMS utility programs, such as BACKUP, COPY, DUMP, and DIRECTORY, at 25 ips. The UETP (User Environment Test Program) is fully supported.

Refer to SPD #26.65.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

TYCHO/HASP

Operating System: VMS
Keywords: • Disk utilities • File management • Networking • Operating systems

TYCHO/HASP is a shareable HASP workstation emulation and management system for RJE data communications with remote IBM and CDC mainframes. The system may be installed on PDP–11/24 through /70 models under RSTS/E and on VAX–11s under VMS.

RJE functions are available to all logged-in users concurrently with RSTS time-sharing services. DIGITAL standard disk structures and user disk areas are employed. The TYCHO/HASP management/queuing subsystem permits users to enter and launch RJE jobs from their own disk area, route returns to a RSTS printer or back to their disk area, and monitor the status of their RJE jobs. Heavy line printer returns may be streamed directly from memory to a system printer, bypassing disk I/O. Once launched, RJE job submissions to and returns from the remote site are managed automatically, whether or not the user remains logged in. Hooks are provided for interface with the system manager's own software. Features include a printer forms management subsystem.

The license fee includes a technical review of the proposed configuration and a 3-month warranty. Full postwarranty support is available. A network fee schedule is available.

A version of this product is available for the PDP–11 computer.

Price: $6000
Contact: D. Marie Jantzi
(519) 679–1367
TYCHO RESEARCH ASSOCIATES, INC.
995 Waterloo Street
London, Ontario N6A 3X4
Canada

UAP–LINK

Operating System: UNIX* (Berkeley, System III, System V), VMS
Keywords: • Data conversion • File management • File transfer

This communications file transfer software family is designed to move binary or text files between mixed or matched computers, using standard ports. A reliable protocol corrects line errors and compresses transmitted data, saving you time and money. Files are ready to be used as stored; no conversion programs are necessary. Configurations can be high-performance local connections, with minimum impact on multiuser systems, or across the nation, using low-cost modems.

UAP–LINK's virtual user facility permits remote time-sharing system commands to be stored in a local command file. You can easily develop automatic procedures to LOGON to the remote system, INJECT several commands, EXECUTE the host module, TRANSFER several files, LOGOFF, and DISCONNECT from the modem to greatly simplify your job. Additional features include data compression, independent device defaults, file protection, and a smart-terminal mode.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $250 – $1250

Contact: W. T. DeRouchey
(714) 730–1012
UNIQUE AUTOMATION PRODUCTS
15401 Redhill, Suite G
Tustin, CA 92680

UltraLink

Operating System: ULTRIX–32, UNIX* (Berkeley)

Keywords: • Asynchronous communication • File transfer

This multiuser communications software provides cost-efficient transmission of data between UNIX* and VAX/VMS operating systems. UltraLink uses an advanced communications protocol to provide a UNIX* command interface for file transfer in both directions, file transfer to VAX/VMS high-speed line printers, and interactive VMS sessions from a UNIX* terminal. Up to eight users may share an UltraLink connection.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $2200

Contact: Mark Horowitz
(603) 643–3800
CREARE R&D INC.
Etna Road, P.O. Box 71
Hanover, NH 03755

UNIVAC NTR

Operating System: VMS

Keywords: • Networking • Telecommunications

This subsystem for UNIBUS-based computers provides data transfer by means of a DMA facility and dual-host support.

A version of this product is available for the PDP–11 computer.

Price: $9000
Contact: Mogens Poulsen
01–20 00 66
A/S DATALOG
Rygaards Alle 104
DK–2900 Hellerup
Denmark

UVCP™ — VAX/VMS to VAX/UNIX* Communication Tool

Operating System: MicroVMS, ULTRIX–32, VMS
Keywords: • Asynchronous communication
• Microprocessor development • Networking

This package, developed by Microtel Pacific Research, provides a convenient asynchronous communication utility for VAX/VMS systems. UVCP is an implementation for VAX/VMS of UUCP, the popular standard UNIX* network communication software utility, which has been a standard part of UNIX* operating systems for several years. A computer running UUCP or UVCP can exchange files with, and request remote command execution from, any other participating computer.

This package requires no special hardware, supports dial-up or direct-connect communications, supports Hayes autodial modems, maintains a UVCP "telephone book," and is written in DIGITAL VAX native-mode code, which requires no compatibility or emulation code.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

VIDEOPRO

Operating System: ULTRIX–32, UNIX* (Berkeley), VENIX
Keywords: • Device drivers/handlers • Graphics

Memory required: 128K.

This C-language decoder is for microprocessors supporting UNIX* or a UNIX*-like operating system or for a suitable C compiler to enable the micro to function as a videotext terminal. VIDEOPRO occupies less than 20K of code and complies with the NAPLPS SRM (Service Reference Model). VIDEOPRO features the use of independent internal routines and files, such as graphics editing; an unlimited number of colors, such as 16M plus; unlimited resolution; and use of independent tables to configure the processor and the data base.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $149
Contact: Richard B. MacKay
(416) 962–3828
SANDFORD COMPUTER SYSTEMS
73 Walker Avenue
Toronto, Ontario M4V 1G3
Canada

VIM (VAX Interface Manager)

Operating System: MicroVMS, VMS
Keywords: • Electronic mail • File transfer • Networking • Personal computing

VIM allows a VAX or a MicroVAX running VMS to function as a file server for an Ethernet-based network of IBM PCs and compatible computers running MS–DOS. VIM interfaces to the network through the DIGITAL Ethernet communications card, which can be used concurrently with DECnet. The file server function allows selected VAX resources to be used by the networked PCs. A designated portion of VAX disk space is accessible from the network and can be used exactly like disk space that resides at the PCs. The VAX printers can be used to print output generated by programs running at the networked PCs. The networked PCs can use an electronic mail system that uses the VAX as a post office.

The file server function and PC network is fully compatible with the EtherSeries product, which is produced by the 3Com Corporation. Each networked PC requires a 3Com EtherLink–network interface board.

Price: $2500 – $7500
Contact: Bill Gerdts
(206) 251–8438
SYNTAX SYSTEMS, INC.
6642 S. 193rd Place, Suite N107
Kent, WA 98032

VMS to Sperry 1100 NTR Emulator

Operating System: VMS
Keywords: • File transfer • Networking • Telecommunications

This VAX/VMS package emulates an NTR remote job entry station to a Sperry 1100 computer. A DIGITAL DUP–11 communications interface on the VAX communicates with the 1100, using a synchronous protocol at speeds up to 9600 baud on a switched, based, or dial-up communications link.

No special system software is required for the VAX. The emulator, distributed on tape and diskette with executable-image files, loads directly into a VAX system, using the standard procedure for optional software. The package also contains programs to handle the receipt of files and to test the communications with the 1100.

Price: Available upon request
Contact: Kurt Ruthmansdorfer
(608) 263–8043
UNIVERSITY OF WISCONSIN
Madison Academic Computing Center
1210 West Dayton Street
Madison, WI 53706

VS11–VAX Driver

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers • Graphics

Distribution media: RX01, TU58 DECtape II cartridge.

The VS11–VAX Driver provides all the I/O services required for communication between a VAX/VMS host and a VSV11/VS11 graphics subsystem. The VS11–VAX Driver enables the user to communicate with the VSV11/VS11, using the QIO executive directive in a MACRO assembly language program or a VAX FORTRAN program.

Features are:

- Execution of a display file containing VS11-specific graphics instructions
- On-demand use of an auxiliary memory segment that contains VS11 instructions, providing extended addressing to the VS11
- Reading back of the four VS11 device registers
- Execution of STOP/RESUME display file
- Waiting for an interrupt that will be generated when the VS11 joystick switch is pressed
- Specifying the QIO complete timeout parameter for display file execution QIOs

Refer to SPD 25.45.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

VTERM II

Operating System: ULTRIX–32, ULTRIX–32m, VMS
Keywords: • Asynchronous communication • File transfer • Networking

This asynchronous communications software, written in assembly language, allows the IBM PC, XT, AT, 3270, and compatibles to talk to DIGITAL's minis and mainframes at speeds up to 9600 baud. VTERM emulates DIGITAL's VT100/101/102/52 terminals and enables a user

to run DIGITAL software (EDT, TECO, WORD–11, EMACS, and so forth) on the PC and to link up to data services such as The Source. File transfer features source software that is transferable to DIGITAL host supports such as VMS, RSTS, RSX–11, and UNIX,* thereby allowing a user to transfer binary files; CRC–16 error detection; and file-transfer protocols, including XMODEM and KERMIT. A user can toggle switches between DOS and VTERM while leaving the terminal screen and the communications link intact. VTERM offers VT1xx–AC/VT102 printer support, a set-up display accessible at any time, an unlimited number of set-up files, 20 programmable/linkable soft function keys, and a true 132-column display. Versions for the TI Professional, the Eagle PC, and the Eagle 1600 are available, but they support ASCII file transfer only.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $160

Contact: Christine Benton
(212) 777–6707
COEFFICIENT SYSTEMS CORP.
611 Broadway
New York, NY 10012

VTERM/4010

Operating System: ULTRIX–32, ULTRIX–32m, VMS

Keywords: • Asynchronous communication • File transfer • Networking

This asynchronous communications software, written in assembly language, allows the IBM PC, XT, AT, 3270, and compatibles to talk to DIGITAL's minis and mainframes at speeds up to 9600 baud. VTERM emulates DIGITAL's VT100/101/102/52 and Tektronix 4010/4014 terminals; enables the PC user to run mainframe graphics applications from SAS, ISSCO, Tektronix (PLOT10), Precision Visuals, and so forth; and saves pictures on disk and draws them on HP and IBM plotters. A user can also run DIGITAL software (EDT, TECO, WORD–11, EMACS, and so forth) and link up to data services such as The Source. File transfer features source software that is transferable to DIGITAL host supports such as VMS, RSTS, RSX–11, and UNIX,* thereby allowing a user to transfer binary files; CRC–16 error detection; and file-transfer protocols including XMODEM and KERMIT. A user can toggle switches between DOS and VTERM while leaving the terminal screen and the communications link intact. VTERM offers VT1xx–AC/VT102 printer support, a set-up display accessible at any time, an unlimited number of set-up files, 20 programmable/linkable soft function keys, and a true 132-column display. Versions for the TI Professional, the Eagle PC, and the Eagle 1600 are available, but they support ASCII file transfer only.

* UNIX is a trademark of AT&T Bell Laboraties.

A version of this product is available for the PDP–11 computer.

Price: $249
Contact: Christine Benton
(212) 777–6707
COEFFICIENT SYSTEMS CORP.
611 Broadway
New York, NY 10012

X.Dot™

Operating System: Independent
Keywords: • Networking

X.Dot, developed by The Community Memory Project, is a line of communications software technology transfer products. X.Dot is a portable C language interface that connects your computer to public or private packet-switching networks. The package implements the published 1980 CCITT Recommendation X.25 and, requiring only a C compiler, is easily portable to any hardware. Software tools to facilitate installation and certification are provided with X.Dot.

X.Dot™ is a trademark of The Community Memory Project.

A version of this product is available for the PDP–11 computer.

Price: $30,000 +
Contact: Susan Blumstein
(415) 540–5000
X.DOT CORP.
Tenth and Parker
Berkeley, CA 94710

XEP (X.25/X.29 Extension Package)

Operating System: VMS
Keywords: • Asynchronous communication • Networking

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

VAX XEP allows a properly configured DECnet–VAX system in a point-to-point DECnet or Ethernet network to make logical connections to Packet Switching Data Networks (PSDNs) conforming to CCITT recommendation X.25 (June 1980) by way of a DECnet Router/X.25 Gateway. The DECnet Router/X.25 Gateway is described in SPD 30.41.xx. The XEP, with the Router/Gateway providing physical connection(s) to a PSDN, enables process-to-process and terminal communications between the VAX and remote Date Terminal Equipment (DTE) in an X.25 network.

DECnet logical links are established by VMS to connect the VAX host to the Router/Gateway. VAX XEP uses those links to transmit X.25/X.29 messages between the Router/Gateway and the host.

VAX XEP supports access for VMS user programs written in VAX MACRO and native-mode high-level languages, such as VAX FORTRAN. Programs executing in PDP–11 compatibility mode cannot use VAX XEP.

VAX XEP is one of a set of DIGITAL products for X.25 communications called the Packetnet Systems Interface (PSI) software. The interfaces implemented in VAX XEP are fully compatible with those of the other VMS members of the product set, such as VAX PSI (SPD 25.40.xx). Thus, VAX XEP and VAX PSI cannot operate concurrently on the user's system.

Refer to SPD #26.43.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $900 – $1500
Contact: Consult your local DIGITAL sales office (see Introduction).

XNS/ITP (Xerox Network Systems Internet Transport Protocols)

Operating System: VMS
Keywords: • Networking • Personal computing • Telecommunications

This complete implementation of the XNS/ITP specifications provides task-to-task communications among VAX/VMS, RSX–11M/M+, 68000/UNIX* System V, and MS–DOS systems in an internetworking environment. Designed to take advantage of Ethernet's low-delay, high-bandwidth capabilities, the NS4200 series of XNS/ITP products are based on a portable implementation written in C in either binary or source code form. A software update service provides a 1-year subscription to code improvements and enhancements. Network management facilities are built into Interlan's NET/PLUS products, and each product includes a network management utility (NETMGR) for displaying more than 40 statistics from a local or remote host.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $500 – $25,000
Contact: William M. Seifert
(617) 692–3900
INTERLAN, INC.
3 Lyberty Way
Westford, MA 01886

Construction

Black Star Publishing Company/John G. O'Connor

BMDES

Operating System: VMS
Keywords: • Architecture • Civil engineering • Engineering • Structural engineering

BMDES designs reinforced concrete beams in accordance with CP110, including reinforcement design, serviceability, and shear checks. Input is either interactive or from previous analysis programs. Output is formatted suitably for checking authorities.

Price: Available upon request
Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

Builder (Homebuilders System)

Operating System: VMS
Keywords: • Cost accounting • Real estate

This residential-contractor system monitors costs of material and labor and applies them against each lot and unit. Cost reports can be obtained at any time, comparing costs to budget and other like models.

A complete buyer profile analysis is built into the system to assist in future advertising plans.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $10,000
Contact: Nigel Harris
(613) 829–8888
HARRIS COMPUTER SYSTEMS
16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

CBEAM

Operating System: VMS
Keywords: • Architecture • Civil engineering • Engineering

CBEAM analyzes continuous beams subjected to various loading conditions. Output is produced graphically and optionally includes bending moments, shear force, diagrams, influence line diagrams, or max/min envelopes. Various support conditions may be included, and the graphical output may be sent to plotting devices for retention of submission. Output from the program may be retained for subsequent member design programs.

Price: Available upon request
Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

CDS*CMCS (Construction Management and Cost Control System)

Operating System: Independent, MicroVMS, VMS
Keywords: • Engineering • Information management • Project management • Scheduling

This construction management control system consolidates items of information that a project team, owner, architect/engineer, or construction manager needs and presents that information in timely and organized reports. CDS*CMCS contains modules or groups of reports that are structured both horizontally (by type of information) and vertically (by management level). The user-oriented system is based on construction-industry practices.

Price: $3500 – $4500
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

CN–11 (Job Cost)

Operating System: MicroVMS, VMS
Keywords: • Accounting • Cost accounting • Project management • Report writer

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This layered package requires the PY–11 Payroll, the GL–11 General Ledger, and the AP–11 Accounts Payable systems as a base. These four packages work together to provide the user with a complete method of posting job cost information to projects and cost centers. Other user-oriented features include:

- User-defined project codes with up to 15 characters and an unlimited number of user-defined cost centers allowed
- Only one entry required to post an invoice to AP–11 Accounts Payable and to distribute the costs to cost centers and projects
- Payroll information distributed from the PY–11 Payroll system on an employee basis to cost centers and projects
- Manual postings allowed

- Transfers between projects and cost centers allowed
- Estimates for projects and cost centers may be posted
- Reports in detail or summary for a range of projects and an unlimited date range
- An audit trail for all entries provided by transaction journals
- A password security system
- Interfaces to the AP–11 Accounts Payable, PY–11 Payroll, and GL–11 General Ledger; other complementary products include the AR–11 Accounts Receivable, FA–11 Fixed Assets, OE–11 Order Entry, and IC–11 Inventory Control systems

CN–11's reports include a project cost analysis; a cost center analysis; a labor, materials, and subcontract report; and project and cost center listings.

The CN–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $10,000
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

Cobra

Operating System: VMS
Keywords: • Calculation aids • Graphics • Simulation • Structural engineering

This program, developed by J.T. Ltd., is for the analysis, design, and detailing of reinforced concrete beams in accordance with CP110. The system produces design calculations, reinforcement fixing details, and bar-bending schedules when given the beam dimensions, span lengths, and loads. The three phases of analysis, design, and detail are automatic, with optional manual intervention at each stage. Cobra produces shear and moment envelopes for each beam, arrangement of bars at supports and spans, and drawings of the reinforcement fixing details.

The program is written in FORTRAN; the smallest configuration required is a MicroPDP with disk, terminal, printer, and plotter.

A version of this product is available for the PDP–11 computer.

Price: £7500 – £15,000
Contact: Trevor Lightburn
(0332) 31517
CAMIC LTD.
47 Bridge Street
Derby DE1 3LB
United Kingdom

Constructimate

Operating System: VMS
Keywords: • Accounting • Cost accounting • Project management • Scheduling

Distribution media: RL02, RX02.

This accurate, efficient, and comprehensive construction management system can be configured for both residential and commercial contractors. The system's modules are job costing, standard costing (for home builders), cost estimating (for general contractors), critical-path management, general ledger, payroll, accounts receivable, and accounts payable.

The integrated menu-driven system eliminates manual postings for each module. Accounts payable and payroll entries update both job costing and financial reports, and posting to multiple profit centers, jobs, and phases is accommodated. Historical job costing data is displayed for comparison while preparing estimates.

Besides the standard accounting reports are the job cost and projected cost reports, job contract summary, application for payment, model and option estimate listings, standard job cost listing, historical cost analysis report, job estimate report, final estimate report, critical-path chart, and critical-path bar graph.

A version of this product is available for the PDP–11 computer.

Price: $6000
Contact: Dwight Johnson
(303) 574–8086
PROFESSIONAL COMPUTER SERVICES
2345 N. Academy Boulevard, Suite 209
Colorado Springs, CO 80909

ConTrac®

Operating System: VMS
Keywords: • Accounting • Cost accounting • Payroll • Project management

Distribution medium: magnetic tape.

This customized construction management and accounting system provides contractors with detailed information on job billings, comparison of job billing to cost, purchase order status by job and vendor, job-complete percentage and remaining cost, tracking of committed dollars against purchase orders and bids by type of job, invoices by job and vendor, vendor payment history, and job cost estimating. ConTrac offers a payroll with provisions for job deductions, union benefits, standard deductions, and benefits. Individual project managers have flexibility of inquiry, separate operators have simultaneous access to common files, all files are protected by password, equipment can be transported to job sites, and unlimited upgrade capability and a word processing package are provided.

The system consists of DIGITAL processors, CRTs, printers, controllers, and disk drives in tandem with exclusive ConTrac system software. The application programs are built around a data base management file structure, allowing DBMS to be added later with full integration. Also available are an integrated electronic spreadsheet and word processor. Customers receive one week of computer instruction for up to three employees and are offered a maintenance contract for both hardware and software.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $25,000
Contact: Richard B. Carroll
(214) 484–9709
CONSTRUCTION COMPUTERS, INC.
2081 Hutton, Suite 107
Carrollton, TX 75006

Contractor Management System

Operating System: VMS
Keywords: • Accounting • Management • Payroll • Purchasing

This comprehensive system provides total management control over job costing and the related contractor payroll functions. The complete flexibility and simplicity of the system allow in-house use by all phases of the contractor market. The fully integrated system allows updating of all phases of job cost information, check writing for payroll, and report generating, both for job costing and for payroll-related reports.

The system allows an unlimited number of jobs and classifications. Payroll may be distributed by department, job, federal labor classification, cost code, and source. The system also provides multiple occupational rates for state and federal jobs, other multiple pay rates, overtime rates, deductions, and union burdens. The system also calculates taxes and workmen's compensation and prints government forms, such as W–2s and 941s.

For job costing, the system provides flexibility in formatting jobs and cost breakdowns, the ability to track both units and dollars for each job breakdown, and 16 types of job cost reports, with numerous run-time selection options. The system prints budget to actual, including the respective variances and percent-complete figures for each job phase.

The system automatically posts the payroll module to the general ledger and job cost modules. Job cost information is updated automatically from accounts payable, accounts receivable, equipment cost, and purchase order. The system allows complete editing and audit trail of journalizing for verification prior to posting to permanent records.

The Contractor Management System consists of the basic general ledger program, job cost (which includes a payroll module), accounts payable, loan amortization, and fixed-asset accounting (depreciation). An optional interface to job cost is available with purchase order, accounts receivable, equipment cost, and bank reconciliation.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

CPM (Critical Path Method)

Operating System: VMS
Keywords: • Civil engineering • Project management • Scheduling

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

CPM computes critical path for medium-size to large construction projects with a maximum of 1000 individual tasks. CPM sorts by early and late starts, early and late finishes, total float, bid items, and sequentially. Dollar values for each task and the total for the project are printed by option.

A version of this product is available for the PDP–11 computer.

Price: $995
Contact: Lyman E. Byrd, Director of Operations
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

D4+

Operating System: VMS
Keywords: • Architecture • Civil engineering • Engineering • Manufacturing

D4+ is a set of programs for the plastic design of steel multibay portal buildings, including all the ancillaries, such as side rails, purlins, crane beams, connections, base plates, and foundations. Design complies with UK BCSA recommendations and current codes of practice used in the steel industry. The programs apply to construction; iron, steel, and metal manufacture; and fabrication markets.

Price: Available upon request
Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

Equipment Cost

Operating System: VMS
Keywords: • Billing • Cost accounting • Maintenance • Management

This system is designed to assist a contractor in maintaining control of vehicles, equipment, and tools by providing information on revenue, cost, and maintenance scheduling. The system is interfaced to general ledger, job cost, and job cost payroll modules.

Some of the significant features are:

- User-defined revenues and costs
- Ten user-defined fields in the equipment master file in addition to standard items
- Multiple billing rates for each piece of equipment
- Rental billing capability by hour, day, week, or month
- Maintenance scheduling by dates or units
- Numerous management reports with variable sort features

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

Estimating System

Operating System: VMS
Keywords: • Architecture • Bill of materials • Civil engineering • Project management

This easy-to-use system prepares estimates, tenders, and bids based on bills of quantities for building contractors. The Estimating System can also be used for cost planning early in a project, preparing bids for contracts, and valuing work and estimating costs once the project is under way. The system contains a price book with plant, labor, and material prices and subcontract and notional rates for similar work executed on previous projects.

Project Software has subsidiaries and distributors in the United Kingdom, United States, South Africa, Australia, and other parts of the world. In the United States, contact John Gillespie (212) 624–2587, Project Software Inc., 257 Hicks Street, Brooklyn, NY 11201.

A version of this product is available for the PDP–11 computer.

Price: £5000 – £7500
Contact: Martin Barnes, Director
(061) 439–6639 or Telex: 666650
PROJECT SOFTWARE LTD.
Foden Lane, Woodford
Stockport, Cheshire SK7 1PT
United Kingdom

ETAKE 2 (Estimating, Takeoff, and Pricing System)

Operating System: VMS
Keywords: • Cost accounting • Electrical • Engineering • Sales analysis

This system for general and electrical contractors includes four modules for takeoff, job pricing and reporting, estimating utilities, and system logoff and wrapup. An optional module, bid closing, assists the contractor in organizing and analyzing bids from subcontractors. The user may customize the system and control all data records.

A version of this product is available for the PDP–11 computer.

Price: $6700 – $12,000
Contact: Robert Sprowls
(800) 874–2400
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

FACS — Job Costing

Operating System: VMS
Keywords: • Cost accounting • Financial analysis • Report writer

This package can be tailored to the requirements of the largest general building contractor business or the solely owned subcontractor company. The system features direct interface to the FACS G/L, FACS Payroll, and FACS A/P; immediate detail on the progress of each project; flexible input, reporting, and maintenance of estimates, budgets, and change orders; job accounting on either a completed contract or a percentage of completion method; variance analysis on budget, committed, and forecast for amounts, units, hours, and unit costs; and interface to subcontractor's subsytem and the purchase order subsystem.

Reporting features include full, flexible reporting on direct costs, labor, purchase orders, subcontractors, and overhead in summary or in detail; full labor cost analysis annually, monthly, or for each payroll period for amounts, units, hours, and unit costs; project cost ledger for month or project-to-date detail; project comparison reporting for sales price, drawn to date, and cost to date; and user-defined job costing reports with the ability to include purchase orders. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP–11 computer.

Price: $2000
Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

FOUNDS

Operating System: VMS
Keywords: • Architecture • Civil engineering • Manufacturing

FOUNDS removes the tedium of calculation and permits the rapid assessment of a pad foundation subjected to several loading conditions. The program is interactive, allowing the engineer to modify the foundation at various stages. Hard-copy printout is available.

Price: Available upon request
Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

INTEREST (Interactive Estimating)

Operating System: VMS
Keywords: • Civil engineering • Cost accounting

This interactive system enables building and civil engineering contractors to accrue rates from first principles and use stored cost and performance data. INTEREST produces priced bills of quantities and a series of reports for the tender meeting and is used in cash flow forecasting, planning, valuation, and costing. INTEREST allows the user to add a time element to each activity and, with existing stored data, produce cash flow analysis and bar chart activity reports.

A version of this product is available for the PDP–11 computer.

Price: £8000 – £10,000

Contact: Trevor Lightburn
0332 31517
COMPUTER AIDED MANAGEMENT IN CONSTRUCTION LTD.
47/49 Bridge Street
Derby DE1 3LB
United Kingdom

JCA (Job Cost Accounting)

Operating System: VMS

Keywords: • Architecture • Cost accounting • Project management

This budget analysis and management control tool for architects and development firms provides cost controls and accurate accounting and analysis. JCA can track phases and tasks of a job from design to completion; compare job cost estimates to actual expenditures for phases and tasks; track add-on costs and overhead-per-hour costs; indicate total billed and paid to date with timely job inquiry; interact with accounts receivable, accounts payable, general ledger, and payroll systems; and automatically write payable checks and provide invoices.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $20,000

Contact: William R. Paschal, Jr.
(405) 843–7323
DATATEK CORP.
818 N.W. 63rd
Oklahoma City, OK 73116

Job Costing

Operating System: VMS

Keywords: • Cost accounting • Project management

This flexible system for construction companies, specialty fabricators/erectors, and project managers provides up-to-date job information, reports on performance and costs, and provides a cost and unit breakdown of the cost elements. Both actual and interim costs are processed. Information is provided for performance analysis and detail costs, including units, unit and lot costs, budgets, variances, current

and projected margins, and more. The system features multicompany concept, unique job setup, job cost elements, early/prior-period entries and adjustments, full function and performance reporting, reporting flexibility, data base concept, full inquiry capability, interface to other systems, and information updating.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $15,000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

MTS–II (Master Tracking System II)

Operating System: VMS
Keywords: • Management • Project management • Scheduling

This computer-based management tool documents, coordinates, expedites, and provides accountability for exception items that develop during large-scale construction and start-up projects. Use of field-proven MTS–II leads to improved control of on-site efforts in resolving the completion of items that would otherwise have an adverse effect on construction and start-up progress. By bringing potential problem areas into focus, MTS–II can help management avoid costly schedule delays.

Price: $75,000 – $90,000
Contact: Mike Rooks
(904) 795–2362
SYSTEMS COORDINATION INC.
P.O. Box 2600
Crystal River, FL 32629

PCM (Project Cost Model)

Operating System: VMS
Keywords: • Architecture • Civil engineering
• Project management • Simulation

This project management system provides project managers with a tool for integrated project control of time, money, and resources. PCM includes facilities for planning, critical-path network analysis, resource allocation, scheduling, cost control, and cash-flow forecasting. Modules for each of those functions are available separately if required. A comprehensive range of printed and plotted reports, such as project network drawings, bar charts, and histograms, are available with very selective reporting options.

PCM can be used with equal facility by project promoters, project managers, designers, and construction contractors to prepare estimates, monitor progress, and plan remaining work on a project. PCM is particularly effective when a forecasting and decision-making support tool is required. PCM allows forecasts of the consequences of alternative courses of action to be provided before project management decisions are taken.

Project Software has subsidiaries and distributors in the United Kingdom, United States, South Africa, Australia, and other parts of the world. In the United States, contact John Gillespie (212) 624–2587, Project Software Inc., 257 Hicks Street, Brooklyn, NY 11201.

A version of this product is available for the PDP–11 computer.

Price: £5000 – £20,000

Contact: Martin Barnes, Director
061–439 6639 or Telex: 666650
PROJECT SOFTWARE LTD.
Foden Lane, Woodford
Stockport, Cheshire SK7 1PT
United Kingdom

PRODAT (Project Day Computation)

Operating System: VMS

Keywords: • Civil engineering • Project management • Scheduling

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

PRODAT computes the dating sequence for any construction-project duration, considering holidays, overtime, and so forth. Output depicts the entire project and the relationship of the nth day of the project to the calendar date. Leap years are considered. PRODAT is written in ANSI (1966) FORTRAN IV.

A version of this product is available for the PDP–11 computer.

Price: $200

Contact: Lyman E. Byrd, Director of Operations
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

Purchase Order System

Operating System: VMS

Keywords: • Cost accounting • Financial management • Purchasing

This flexible, comprehensive module is designed to interface to the accounts payable, general ledger, and job cost modules in the Contractor Management System.

Some of the features are:

- Up to 99 line items for each purchase order, with each line item assigned to a vendor and charged to a job, category, class, and source
- Individual item status maintained and indicated by open, received in full, partially received, or canceled
- Units on order, unit cost, description, and inventory number maintained
- Flexible report capabilities by job, vendor, issue, or delivery date
- Committed-cost reporting
- Automatic posting to job cost, accounts payable, and general ledger as items are received

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

RTAIN

Operating System: VMS

Keywords: • Architecture • Civil engineering • Engineering

Interactive, conversational RTAIN uses traditional analysis techniques to produce output in a format that is suitable for checking authorities and that complies with CP.2 Earth Retaining Structures and CP110, the Structural Use of Concrete. The user specifies a first trial for the wall profile, together with the soil and loading parameters. The user can change the data while the program is running. When the user is satisfied with the design, a set of calculations and results are output on standard calculation sheets automatically headed and numbered.

Price: Available upon request

Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

SLAB

Operating System: VMS
Keywords: • Architecture • Civil engineering • Engineering

SLAB designs 1-way and 2-way spanning slabs in compliance with CP110. Any support conditions may be specified, and a prescribed area of steel may be specified over any of the supports. The moments for 2-way spanning slabs are based on yield lines and are similar to those calculated using table 13 of the code. A specified steel area is taken into account when calculating the remaining moments. For 1-way spanning slabs, yield lines are again used. That method is acceptable for the ultimate limit state but could give problems due to deflection at serviceability. The moments from yield lines are low compared to factored elastic moments; thus, the program factors them by 1.2 to bring them into the same range as the elastic moments and to reduce the possibility of problems at serviceability.

Price: Available upon request
Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

SuperVisor™

Operating System: VMS
Keywords: • Cost accounting • Decision support • Project management • Scheduling

This native-mode interactive project management and control system runs on any VAX/VMS system through a VT100/200–series terminal and uses an LXY300 or equivalent printer/plotter as an output device. Other plotters and graphics devices may easily be adapted.

Some features include:

- Input is through batch data files or interactive screens, with an unlimited number of activities (within computer system limitations), 16-character activity numbers, and 40-character activity descriptions. Durations may be in working days or calendar days.
- Optional reporting by user-designated key activities permits the display of up to six user-selected symbols for cross-referencing contract modification and so forth. Interactive updating with optional journaling of the nature and reason for all changes allows the simulation of the effects of changes before they are incorporated.
- Gantt charts may be plotted up to five feet long on the time line and as deep as necessary for the number of activities displayed. Those plots show the present schedule compared to the baseline or original schedule.

- Time-scale precedence networks may be plotted showing either the entire project or user-selected time windows.
- Milestones may be fixed in time or allowed to float for planning purposes. Start and completion dates may be entered either manually or from an update tape of accounting information. The scheduled time for any activity may be automatically slipped if it has not occurred on the effective date of any report. Partial completion lags may be used (an activity may start when its predecessor(s) are complete by a given percentage).
- All standard CPM reports are produced (sorts by activity number, early start, total float, and so forth), as well as complete predecessor/successor reports, completed-activity reports showing budgeted versus actual costs, resource allocation, and reports of activities under way or due to begin within a designated time period.

SuperVisor is available unbundled as a software package with training and support and with optional customizing. The system is also available as part of the Sentinel planning and scheduling service, provided jointly by Mathematical Sciences Northwest and Columbia-Sentinel Engineers. The software and service have been field tested on shipyard projects over the past decade.

Price: $6000
Contact: Mike Storie
(206) 827–0460
MATHEMATICAL SCIENCES NORTHWEST, INC.
2755 Northup Way
Bellevue, WA 98004

TRACK 50

Operating System: VMS
Keywords: • Civil engineering • Engineering • Project management • Scheduling

Memory required: 1MB. Distribution medium: magnetic tape.

This versatile, comprehensive scheduling system for engineering and construction firms provides current status, analysis, and reporting of project activities. Schedules can be created by using precedence (activity on node) or I–J (activity on arrow) scheduling techniques. Information is displayed in a readable, manageable form by using the 23 standard reports or the optional report writer. Resource leveling and advanced scheduling, including multilevel schedules, are available as optional modules. TRACK 50's Network Graphics module translates complicated schedule reports into color graphics, including time-scaled network diagrams and Gantt bar charts.

TRACK 50, written in FORTRAN, may be tailored to specific project demands. TRACK 50 serves small to midsize commercial, municipal, and industrial projects, such as wastewater treatment plants and complex power plant construction, with budgets as high as $1.5 billion and

with durations as long as seven years. Other applications include aerospace projects, software design, and heavy-machinery production. On-site training, hot-line support, and ongoing maintenance are included.

Price: $20,000 – $62,000

Contact: Robert L. Bartholomay
(313) 973–1900
T AND B COMPUTING, INC.
1100 Eisenhower Place
Ann Arbor, MI 48104

WORK–PAC

Operating System: VMS

Keywords: • Production control • Project management

WORK–PAC, an effective labor planning and control system, uses the work package concept for project work authorization and applies statistical techniques to automate job progress, final work-hour cost projections, and trend analysis. A user-oriented system, WORK–PAC offers many features for quick and easy development and update of work packages. Input in the form of budgeted and scheduled work may be cataloged by any combination of section, zone, work center, or trade. Reports can be produced for any of those categories.

- Project features include project identification and direct timecard updating, summary and detail-level reporting, and an option that conforms to the U.S. government cost schedule performance criteria. Some data elements of the reports include budgeted cost of work scheduled and performed, actual cost of work performed, current progress, current work hours ahead/behind schedule and budget, total work hours budgeted, estimated total work hours at completion, and estimated total work hours saved/lost at completion.
- User features include easy package development and modification, error detection for complete data accuracy, labor loading and leveling, automated physical progress assessments, and final-cost projections.
- Technical features include an unlimited number of projects/system and work packages/project. The maximum number of trades for each work package is 25; for each system, 100. WORK–PAC can also process special work packages such as time-phased, distributed, rework, and change orders.

A version of this product is available for the PDP–11 computer.

Price: $11,500 – $30,000

Contact: Frank Weston
(301) 263–8593
SPAR ASSOCIATES
927 West Street
Annapolis, MD 21401

Data Conversion

Camerique

8080 Translator

Operating System: VMS
Keywords: • Pre- and postprocessors • Programming tools • Translators

This software converts Microsoft M80 source code to Boston Systems Office (BSO) source code and includes conversion of assembler directives, as well as 8080 to Z80 code. Source code may contain Z80 and 8080 code, and some errors (expression length and so forth) may be encountered.

The program consists of three modules. The main module is trans.c, which converts assembler directives, preprocesses the text for the 8080 to Z80 code conversion, and handles all file processing. Code is converted by the optrans.c module, which uses a look-up table from the optrans.tbl file. Executable code is produced by compiling and linking the C programs (link trans, optrans). The optrans.inc file contains the common variables. DECUS number VAX–97.

Price: $5 – $225
Contact: DECUS (see Introduction)

ADF01/VMS Subroutine Library

Operating System: VMS
Keywords: • A/D, D/A • Data collection • Software utilities

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

Available in Europe only, the ADF01/VMS Subroutine Library for VAX/VMS provides the user with a high-level language interface to the ADF01 data-acquisition subsystem. The ADF01, a high-speed multichannel analog data-acquisition subsystem (DAS), is connected to the UBA (UNIBUS adapter) through the DRE11–C DMA interface. The device has 16 single-ended or 8 differential input channels. Conversion on a selected channel takes place on receipt of a clock pulse that can be programmed to come from user input or from an internal programmable clock. For each conversion, the gain and channel number are contained in one of 1024 entries in the ADF01 control table, which can then perform a large, fixed sequence of conversion operations.

In addition to the subroutine calls, the package includes a set of command files to generate a control word table, to link the control table and user program, and to build the ADF01/VMS Subroutine Library. The package also contains programs to calibrate the system and to run a DAC–ADC loop-back test.

Refer to SPD #26.61.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

Applicon 860 to/from Calma GDS2–Stream Format

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • CAD/CAM • Electrical • Electronic • File management

These programs translate Applicon AGS/860 CAD data bases to and from Calma GDS2–Stream format data bases. Cell and structure nesting is preserved. Data types are maintained if equivalents exist. Parameterized control allows cell and structure renaming, level mapping, and other features.

(Data base conversions are also performed as a service using this software.)

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $12,000 – $18,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

Applicon APPLE/860 to/from Caltech Intermediate Format

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Electrical • Electronic • Engineering

These programs translate Applicon APPLE/860 CAD data bases to and from Caltech Intermediate Format (CIF) data bases. Cell and symbol nesting structure is preserved. Data types are maintained if equivalents exist. Parameterized control allows cell and symbol renaming, level mapping, and other features.

(Data base conversions are also performed as a service, using this software.)

Price: $10,000 – $15,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

Applicon APPLE/860 to/from Computervision CADDS2 Formats

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Electrical • Electronic • Engineering

These programs translate Applicon APPLE/860 CAD data bases to and from Computervision CADDS2 External and Exchange formats data bases. Cell nesting structure is preserved. Data types are maintained if equivalents exist. Parameterized control allows cell renaming, level mapping, and other features.

(Data base conversions are also performed as a service, using this software.)

Price: $12,000 – $18,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

Applicon APPLE/860 to/from Daisy Gate Array Interface Language Formats

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Electrical • Electronic • Engineering

These programs translate Applicon APPLE/860 CAD data bases to and from Daisy systems GAIL format data bases. Cell nesting structure is preserved. Data types are maintained if equivalents exist. Parameterized control allows cell renaming, level mapping, and other features.

(Data base conversions are also performed as a service, using this software.)

Price: $5000 – $10,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

Applicon APPLE/880 to/from Intergraph ISIF Formats

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Engineering • Mapping • Mechanical engineering

These programs translate Applicon APPLE/880 CAD data bases to and from Intergraph-format data bases. Cell nesting structure is preserved. Data types, text, and properties are maintained if equivalents exist. Parameterized control allows cell renaming, level mapping, and other features.

(Data base conversions are also performed as a service, using this software.)

Price: $16,000 – $24,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

BASIC–PLUS System Dependency Flagger

Operating System: VMS
Keywords: • File transfer • Programming tools
• Software utilities • Statistics

Memory required: 11,264KB.

This utility assists conversions of BASIC–PLUS and/or BASIC–PLUS–2 programs from PDP–11 systems to VAX/VMS by reading the BASIC source code and reporting on lines that contain flowing-system-specific dependencies. The program can be compiled and run under VAX–11 BASIC or under PDP–11 BASIC–PLUS–2.

Input to the utility can be either a single file name or an indirect command (@filename), which names a file that contains a list of file names to be examined. Output consists of a report file and summary information printed on the user's terminal. The report file lists the EDT line numbers, by file, where system-dependent code has been detected. Summary information printed on the terminal includes a summary by file name of the types of system dependencies encountered.

This utility can be used to quickly scan a large number of files and to report the specific dependencies as well as statistics on the overall kinds of system dependencies of the application programs at a user site. That information can then be used as one input to a conversion-planning process. DECUS number 11–682.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

BSO/Fmtcnv (Format Conversion Program)

Operating System: ULTRIX–32, VMS
Keywords: • Application development
• Microprocessor development

Memory required: 128KB minimum.

BSO/Fmtcnv permits users of emulators to develop applications in the multiuser, high-speed environment of DIGITAL's computers and still perform symbolic debugging on the emulators. BSO/Fmtcnv reformats object files from BSO to and from Intel binary and H–P binary formats. Symbols are supported.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BSO/Objcnv Format Conversion Program

Operating System: ULTRIX–32, VMS
Keywords: • Microprocessor development • Programming tools

The Objcnv set of programs permits the microprocessor system developer to convert programs in one microprocessor object format to another. Programs can be converted between BSO format and Intel, Motorola, Texas Instruments, Tektronix, H–P, Emulogic, Millennium, Zilog, or other formats.

Intel symbolic object format and Tektronix 8001/8002/8540/8550/8560/8561 MDL up-line/down-line loading are also supported. A DIGITAL computer user can therefore develop programs for any microprocessor on a fast single- or multiuser system. The program can be transmitted in the proper format to the test board, emulator (ICE), or PROM programmer.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800 or TWX: (710) 324–0760
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

CALC (A Calculator Program)

Operating System: VMS
Keywords: • Calculation aids • Mathematics

Memory required: Approximately 249 peak virtual pages. Distribution medium: magnetic tape.

This calculator evaluates arithmetic expressions. In its basic form, expression evaluation is similar to that used by ANSI FORTRAN with calculations performed on INTEGER*4 and REAL*8 constants. Variables are limited to single alphabetic characters. Additional features include octal, hexadecimal, and multiple-precision arithmetic capabilities. Commonly used commands and expressions can be placed in a file and executed when convenient. The user should be familiar with FORTRAN data types, constants, expression syntax, operator precedence, and the syntax for assigning values to variables.

This version is similar to DECUS number 11–341, with the following exceptions:

- FORTRAN modules run in VAX native mode.
- The GETMCR module is modified so that CALC can be invoked as a VMS foreign command.
- Commands in lowercase are converted to uppercase.
- If a command error occurs, the default base is left unchanged.

Documentation is on magnetic media. DECUS number VAX–15.

Price: $5 – $225
Contact: DECUS (see Introduction)

Calma GDS2–Stream to/from Caltech Intermediate Format

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Electrical • Electronic • Engineering

These programs translate Calma GDS2–Stream CAD data bases to and from Caltech Intermediate Format (CIF) data bases. Structure and symbol nesting structure are preserved. Data types are maintained if equivalents exist. Parameterized control allows cell and symbol renaming, level mapping, and other features.

(Data base conversions are also performed as a service, using this software.)

Price: $10,000 – $15,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

CONPAX

Operating System: ULTRIX–32, VMS
Keywords: • Programming tools • Software utilities • Translators

CONPAX, a utility that converts PDP–11 assembly code to VAX–11 "native mode," runs on both PDP–11 and VAX–11 computers and produces VAX–11 assembler source code more quickly and with fewer errors than can be accomplished by manual conversion. Conversion to "native mode" provides the full power of the VAX–11 hardware and software, in contrast to the substantially slower execution speed and limited capabilities of "compatibility mode."

In the conversion process, CONPAX uses addressing modes and other information from the PDP–11 assembly code to produce the VAX–11 conversion for each line, including generation of multiline alternatives when appropriate. CONPAX automatically handles details such as octal constants, ASCII literals, and register names and includes a general macro capability that can be invoked at conversion time.

The conversion process is heavily table driven, and the conversion tables can be "tuned" by the user to a specific programming environment.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Stephen F. Heffner
(609) 737–2727
PENNINGTON SYSTEMS INC.
65 South Main Street, Building C
Pennington, NJ 08534

Convert Tape Utility

Operating System: VMS
Keywords: • Diagnostics • Documentation • File transfer • Software utilities

Used in the transfer of files between the DIGITAL and IBM environments, this utility creates and processes labeled or nonlabeled tapes from ASCII to EBCDIC and EBCDIC to ASCII formats; provides selected density — 800 bpi, 1600 bpi, and 6250 bpi — allows use of IBM high-speed laser printers; offers multireel support, error-message handling, and a HELP function; allows dumping of a file in any format to any type of terminal and the spooling of files to a single tape; and ensures that all data is processed.

Markets include users who require installations running on both a DIGITAL and an IBM mainframe or users who must interface with IBM environments for either the creation of a tape or the processing of an IBM formatted tape.

An educational discount is standard.

A version of this product is available for the PDP–11 computer.

Price: $3000
Contact: Richard F. Dyas
(201) 548–4660
EDISON SOFTWARE SYSTEMS
190 Lincoln Highway
Edison, NJ 08820

DACS (Data Acquisition and Conversion System)™

Operating System: VMS
Keywords: • A/D, D/A • Data collection • Disk utilities

Distribution medium: 9-track 800 bpi magnetic tape.

This library of FORTRAN-callable subroutines is for digital-to-analog and analog-to-digital conversion of data, data compression/expansion, and efficient disk file input/output. DACS interfaces the DIGITAL LPA–11K Laboratory Peripheral Accelerator hardware and software operating on VAX–11/780 or PDP–11 computers to a user-oriented FORTRAN environment.

DACS allows multichannel input and output to/from disk in dedicated mode while under FORTRAN control. In addition, nonlinear scaling is optionally available for compressing 12-bit A/D samples to 8-bit byte representations in real time. Those samples are efficiently stored on the disk, then expanded back to linear 12-bit samples at the D/A output. Both A-law and micro 255-law compression tables are provided with DACS. DACS incorporates fast and efficient input/output MACRO routines for data transfer to/from disk.

The maximum aggregate sampling rate is determined by the LPA–11K hardware specifications, disk drive transfer rates, priority level, and system loading. Typical maximum aggregate sampling rates to/from disk are near 50 kHz, and rates to/from memory buffers are near 150 kHz.

DACS functions as a stand-alone software library or as a software interface to Signal Technology's Interactive Laboratory System (ILS), an organized software package for high-level user-oriented digital signal processing.

DIGITAL distributes this software product under license from Signal Technology, Inc., 5951 Encina Rd., Goleta, CA 93117.

Refer to SPD #A0.21.xx when requesting further information on this product from your local DIGITAL sales office.

DACS (Data Acquisition and Conversion System)™ is a trademark of Signal Technology, Inc.

A version of this product is available for the PDP–11 computer.

Price: $4000

Contact: Consult your local DIGITAL sales office (see Introduction).

DATA–LOCK®

Operating System: VAXELN, VMS

Keywords: • File management • Security

Memory required: 45KB.

This data encryption software product allows system users to protect their data stored on disk or transmitted over lines. Data protected with DATA–LOCK is secret to a key holder and private from everyone else — even the system manager. DATA–LOCK incorporates an extremely fast implementation of the U.S. Bureau of Standards Data Encryption Standard (DES), providing full key management support and an optional user program interface.

DATA–LOCK is written in Pascal and assembler and is available on all standard distribution media.

A version of this product is available for the PDP–11 computer.

Price: $500 – $2000
Contact: Dr. John Yardley
44 (01) 949–1088
JPY ASSOCIATES LTD.
138 High Street
New Malden, Surrey KT3 4EP
United Kingdom

DECAL to DAL Translator

Operating System: VMS
Keywords: • Computer-aided instruction • Education • Programming tools • Translators

This translator is used to migrate lessons created with DECAL (DIGITAL's RSTS/E Authoring Language) to DAL, a component of the Courseware Authoring System (CAS). The tape contains seven files: 0README.TXT, the file you are reading; DECALDAL.ABS, an abstract describing the functionality of the software; DECALDAL.BAS, the source code, written in VAX–11 BASIC, for the translator; DECALDAL.COM, the command procedure for using RUNOFF to create a print file for the manual; DECALDAL.MEM, RUNOFF output of the DECAL–DAL Translator Definition manual ready for printing; DECALDAL.OBJ, object module for DECALDAL; and DECALDAL.RNO, RUNOFF input file for the DECAL–DAL Translation Definition manual. DECUS number VAX–90.

Price: $5 – $225
Contact: DECUS (see Introduction)

DECdx/VMS

Operating System: VMS
Keywords: • Asynchronous communication • File transfer • Word processing

Distribution media: RX01, TU58 DECtape II cartridge.

DECdx/VMS enables WPS–8–based systems, both stand alone and shared resource, and the host to be linked for better system use, document exchange, and information and data sharing. Communication between the WPS–8 and the VAX/VMS systems uses the DIGITAL Standard Document Exchange (DX) error-detecting and error-correcting protocol and file format.

Users of DECmates and other DIGITAL WPS–8–based systems can use DECdx/VMS to transfer documents between the WPS–8 system and the VAX/VMS host over a serial line interface. The WPS word processing document formats and the print control characters are retained. During a DECdx/VMS session, the WPS–8 system operates as though it were another terminal on the host system.

DECdx/VMS features compatibility, shared access, and transfer, add, conversion, print, read, delete, and index functions. On-line user assistance, a user's manual, a getting-started card, and installation instructions are included.

Refer to SPD #26.36.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1410 – $2350
Contact: Consult your local DIGITAL sales office (see Introduction).

FACT™ (FORTRAN Automatic Conversion Tools)

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools • Translators
Distribution medium: magnetic tape.

This tool allows you to move FORTRAN programs from one computer to another or to translate them from one dialect to another. In most cases, the conversion rate is 90% or better. FACT PLUS provides additional tools that automatically handle the more subtle aspects of a conversion effort.

Price: Available upon request
Contact: Sales Department
(805) 683–5777
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

Intergraph ISIF to/from Computervision CADDS3 Formats

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Engineering • Mapping
• Mechanical engineering

These programs translate Intergraph CAD data bases to and from Computervision CADDS3 format data bases. Cell nesting structure is preserved. Data types, text, and properties are maintained if equivalents exist. Parameterized control allows cell renaming, level mapping, and other features.

(Data base conversions are also performed as a service, using this software.)

Price: $16,000 – $24,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

Intergraph ISIF to/from Computervision CADDS4 Formats

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Engineering • Mapping • Mechanical engineering

These programs translate Intergraph CAD data bases to and from Computervision CADDS4 format data bases. Cell nesting structure is preserved. Data types, text, and properties are maintained if equivalents exist. Parameterized control allows cell renaming, level mapping, and other features.

(Data base conversions are also performed as a service, using this software.)

Price: $16,000 – $24,000
Contact: Ralph Guditz
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

Mixed-Radix Fourier Transform Program

Operating System: Independent
Keywords: • Mathematics • Programming tools

The mixed-radix Fourier transform code computes the discrete Fourier transform of a set of real or complex data points, using FORTRAN IV–PLUS. The fast Fourier transform programs usually encountered are Radix-2 transforms, where the number of data points is restricted to a power of 2. With the mixed-radix code, the number of data points that can be transformed is much more flexible. In those routines, the number can be a product of a power of 2, 3, 4, or 5.

The transform has two stages: first, the data is reordered; second, the arithmetic operations of the transform are performed. For speed and generality, the first stage requires an additional workspace array equal in size to the input data array. Another stage is required if the input data is real. If the data is complex, the real and imaginary parts are stored as FORTRAN stores them. The code is not optimized. On a PDP–11/34 with floating-point processor, a 1000-point transform takes 1.52 seconds. DECUS number 11–559.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

MOLDYN (A Molecular Dynamics Package)

Operating System: VMS
Keywords: • Energy • Mathematics • Scientific

Memory required: Up to 32KW. Distribution medium: magnetic tape.

MOLDYN calculates the classical Newtonian trajectory for a system of interacting particles whose initial configuration and momenta are specified by the user. The forces acting between the particles are determined by potential energy information separately initialized (in terms of a nonredundant set of internal coordinates of stretches and bends, allowing interactions among them). The program allows the user to follow the detailed trajectory or to ignore intermediate states of the system.

The program can also be used to obtain a (locally) minimum energy configuration of the input system. The program can repeat trajectories with the same initial configuration but for random orientation and impact parameter of a monatomic collider. The program can also repeatedly subject the central molecule to collisions with a single atom from random directions and with random impact parameters.

Provided along with MOLDYN is NORMOD, which uses the same files as MOLDYN and solves for the normal modes of the system in internal coordinates. NORMOD can project internal coordinate information saved by MOLDYN onto the normal modes, using the matrix of eigenvectors transforming between internal and normal coordinates. Other, smaller programs include ANALYZ, CONTUR, and MOVIE.

(These programs require, respectively, a user-provided differential equation solver and a user-provided eigen-problem solver. The code as provided expects to use the IMSL routine DVERK and the EISPACK routines RG.)

Note: Two bugs fixed are rotational energy and scale factor in normal mode analysis. The program has been amplified to save vibrational and rotational energy information during a trajectory; the documentation has been expanded accordingly.

Documentation is on magnetic media. DECUS number VAX–41 and DECUS number 11–570.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

OBJCON (General-Purpose Object Module Conversion Utility)

Operating System: ULTRIX–32, VMS
Keywords: • Microprocessor development • Software utilities • Translators

This general-purpose conversion utility transforms an object (or load) module into several standard formats. The source and target object module formats may be one of OASYS's unique formats or standard ones used by other software suppliers.

Object modules need be converted only once. For example, a Whitesmiths Object Module "string" function would normally be extracted from its library and converted once through OBJCON. From then on, the function is compatible with the OASYS Linker.

OBJCON also converts standard OASYS Linker output (S-record images) to UNIX*-equivalent "A.OUT" format.

The following summarizes possible input and output object modules combinations: input object modules, such as Whitesmiths relocatable, OASYS relocatable, Motorola relocatable, and A.OUT; output object modules, such as S-record, A.OUT, Motorola relocatable, OASYS relocatable, and memory image.

OBJCON, written in C, is available in binary or source code for clients wishing to use the built-in OBJCON reader, writer, and conversion routines to extend OBJCON to support a new input or output format.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

POLFIT (A General Polynomial Fitting Program)

Operating System: VMS
Keywords: • Mathematics

Memory required: 241 pages.

POLFIT is an interactive program fitting the function $f(x)$ to data input as X,Y pairs, where $f(x)$ has the function form:

$$f(x) = a1*x**p1* + a2*x**p2 + ...;$$

The powers p are arbitrary real numbers specified by the user; the returned coefficients a provide the best least-squares fit.

Data is input under user-specified format(s) from one or two files. The powers and the number of coefficients are specified interactively, and the program returns the fitted coefficients and the goodness-of-fit parameter rho**2.

The program includes a line printer/terminal plotting option allowing display of the data and the fitted curve.

Documentation is on magnetic media. DECUS number 11–554.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

Professional Real-Time Interface Library

Operating System: VMS
Keywords: • Device drivers/handlers • Programming tools • Software utilities

Distribution media: RX01, TU58 DECtape II cartridge.

This library provides subroutines to control real-time data transfers to and from external devices using the PC3xx-AA Real-Time Interface and the ADMPC-xx Analog Data Module (ADM) options for PC300-series personal computers. The library includes routines for serial asynchronous I/O, IEEE–488 operation, parallel digital I/O on either the RTI's 24-line parallel port or the ADM's 8-bit input/8-bit output ports, analog inputs to memory and to disk, and utility operation, including unit conversions and bit checking, setting, and clearing. Professional Real-Time Interface Library supports hardware initialization, establishment of handshaking or flow control parameters, and data transfers to, from, or between devices interfaced to the PC3xx-AA and/or ADMPC-xx.

I/O operations can be performed synchronously or asynchronously with the calling tasks. Calls can be made concurrently from multiple tasks. The user can also create a shared resident library of subroutines callable from Professional Tool Kit BASIC–PLUS–2, Professional Tool Kit FORTRAN–77, and Profession Host Tool Kit Pascal. After development using the Professional Host Tool Kit, the programmer can run the applications on an appropriately configured PC300 target system.

Refer to SPD #30.37.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $300
Contact: Consult your local DIGITAL sales office (see Introduction).

PROM Programming Software

Operating System: VMS
Keywords: • Development tools • Microprocessor development • Software utilities • Translators

PROM enables engineers or production personnel to program PROMs or EPROMs, using any PROM programmer that supports Intel HEX format. The PROM programming software, called HOP (Hex Output Program), accepts a variety of DIGITAL file types for input and converts them to a format that can be directly down-line loaded to a PROM programmer over a standard serial line. MicroPower/Pascal .MIM files are supported by HOP.

A version of this product is available for the PDP–11 computer.

Price: $450 – $650
Contact: Phil Denzer
(413) 549–6994
PROCESS SOFTWARE CORP.
35 Montague Road, P.O. Box 746
Amherst, MA 01004

REFOR

Operating System: VMS
Keywords: • File management • Source code control

This package assists in converting FORTRAN card decks to nice files for readability and editing. HOLLERITH-constants are removed.

The method of renumbering assists in understanding complicated code. The prettyprinting can be used repeatedly as changes are made for indenting. Also included is SPFOR, a program for splitting up a file into individual programs and giving names to the programs.

Documentation is on magnetic media. DECUS number VAX–26.

Price: $5 – $225
Contact: DECUS (see Introduction)

RSTS/E to VAX/VMS Batch Stream Conversion Utility

Operating System: VMS
Keywords: • Communications • File management • Operating systems • Software utilities

This unsupported utility, consisting of the conversion utility software and a user's guide, was developed by DIGITAL European Software Engineering under the RSTS/E and VAX/VMS coexistence effort. This utility helps RSTS/E users maintain the investment in their batch streams if RSTS/E batch-processing applications are migrated from RSTS/E to VAX/VMS.

The utility, which runs on VAX/VMS V2.0 or later versions, converts RSTS/E batch statements to VAX/VMS DCL statements. RSTS/E batch command files and indirect command files can be converted to VAX/VMS command procedures. Everything that is not convertible is clearly and explicitly documented in the output. If something cannot be converted, the utility gives reasons and possible alternatives.

This product will not convert all RSTS/E batch streams. Specifically, this utility is not guaranteed to effectively convert privileged operations (the concept of privilege on VAX/VMS is different from that on RSTS/E). Most likely, users would want to reprogram their operator functions and system manager functions to take full advantage of VAX/VMS.

The user's guide provides tutorial information, as well as full details of the utility. The user's guide is aimed at RSTS/E users and contains references to RSTS/E publications and assumes a limited knowledge of VAX/VMS, as given by the *VAX/VMS Primer*.

Documentation is on magnetic media. DECUS number VAX–13.

Price: $5 – $225
Contact: DECUS (see Introduction)

STAT

Operating System: VMS
Keywords: • Graphics • Mathematics • Source code control • Statistics

Distribution medium: magnetic tape.

STAT contains approximately 30 statistical analyses and control routines, including simple population statistics and listings, several forms of regression statistics and analysis of variance, and several nonparametric tests.

The program OUTLAY functions as a numerical editor for interactive construction of data files and supports (primitive) interface to SPSS.

The program also contains graphical routines and a program for nonlinear regressions, using a Gauss-Neuton-type minimization (LESQ).

The program is modular, so a new routine can be added easily.

This version of STAT supports only VMS. Previous versions run on the PDP–11 and the Professional. The programs are based on FORTRAN–77 and contain many constructs that make adaptation to earlier FORTRAN compilers difficult. A complete installation procedure is not available for VMS. DECUS number VAX–5.

Documentation is on magnetic media.

Note: This version contains several major bug fixes and improvements in general user interface, together with a few new routines.

Price: $5 – $225
Contact: DECUS (see Introduction)

Time Calculator

Operating System: VMS
Keywords: • Calculation aids • Mathematics • Operations

Time Calculator allows a VAX/VMS user to perform addition, subtraction, multiplication, division, and comparison on time values when using DCL (DIGITAL Command Language) interpreter. This ability is very useful when time values have to be calculated for use in various DCL commands — for example, BACKUP, SUBMIT, PRINT, DELETE, and DIRECTORY. The calculator can deal with absolute time and delta time formats and can also handle month and year transitions. The calculator can also return the results in a DCL symbol that can then be used by the DCL commands that follow. Once defined as a DCL foreign command, the calculator is used like any other command on the system. Time Calculator converts time values to 64-bit binary values that are then used to perform calculations and comparisons. The system services SYS$BINTIM and SYS$ASCTIM are used for the time conversions. Complete HELP instructions describing the program's use and syntax are supplied.

Documentation is on magnetic media. DECUS number VAX–20.

Price: $5 – $225
Contact: DECUS (see Introduction)

UNIXLIB

Operating System: UNIX* (Berkeley)
Keywords: • A/D, D/A • Device drivers/handlers • Diagnostics • Software utilities

This real-time software subroutine library supports the analog and digital I/O features of Data Translation's DT1770 board for the UNIBUS. The package consists of a device driver, a configuration command file for each software installation, the user-interface library, bootable hardware diagnostics, and test programs. The library is written in C and may be called from an application program written in FORTRAN or in C.

The major features of the user-interface library are single-word, single-buffer, and continuous analog I/O transfer; signal averaging as a separate data-acquisition mode; support of data transfer between mass storage and the analog I/O peripheral; and pre- and posttrigger sampling.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $3295
Contact: Vik Karevicius
(617) 481–3700 ext. 238
DATA TRANSLATION, INC.
100 Locke Drive
Marlboro, MA 01752

Very Extended Integer Arithmetic

Operating System: VMS
Keywords: • Mathematics

These subroutines offer the capability of extended precision integer arithmetic on the VAX. Input arguments can be of any length in bytes. Output arguments allow the user to specify the number of bytes in which to store the result, as well as inform the user of the number of bytes actually required to store the result.

The subroutines are reentrant. The length of the strings passed for each subroutine is limited only by the amount of user stack space.

The VAX/VMS run-time library offers two similar routines, LIB$ADDX and LIB$SUBX. While the DIGITAL routines require fewer arguments, they do require operands to be the same length. The length must be in longwords, and the length must be greater than one.

Documentation is on magnetic media. DECUS number VAX–27.

Price: $5 – $225
Contact: DECUS (see Introduction)

VIOS (Video Input/Output and Processing Software)

Operating System: VMS
Keywords: • Application development • Graphics • Real time • Signal processing

This software package is designed to add powerful real-time video input, output, and processing capabilities to DIGITAL computers using the Datacube QVG family of video hardware. With VIOS, computerized video applications can be developed that will perform at real-time video rates. Applications range from industrial measurement and control to machine vision, robotics, and medical imaging. Some of the input, output, and processing operations include spatial filtering; temporal filtering; high- and low-pass filtering; edge enhancement; image preprocessing; nonlinear and discontinuous transforms; image integration, summation, and so forth; and image multiplexing.

Specialized software functions that are not available in the standard VIOS software package can be added on request.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $2900
Contact: Phil Denzer
(413) 549–6994
PROCESS SOFTWARE CORP.
35 Montague Road, P.O. Box 746
Amherst, MA 01004

VMSLIB

Operating System: VMS
Keywords: • A/D, D/A • Device drivers/handlers • Diagnostics

This real-time software package supports the analog and digital I/O features of Data Translation's DT1770 board for the UNIBUS. The package consists of a device driver, a configuration command file for easy software installation, a user interface library, bootable hardware diagnostics, and several test programs. The library may be called from an application program written in FORTRAN, C, MACRO, or Pascal.

The major features of the user-interface library are single-word, single-buffer, and continuous analog I/O transfer; signal averaging as a separate data-acquisition mode; support of data transfer between mass storage and the analog I/O peripheral; and pre- and posttrigger sampling.

Price: $3295
Contact: Vik Karevicius
(617) 481–3700 ext. 238
DATA TRANSLATION, INC.
100 Locke Drive
Marlboro, MA 01752

VTC (VT100/VT52 Interactive Full-Screen Calculator)

Operating System: VMS
Keywords: • Mathematics • Scientific • Software utilities

VTC is an interactive full-screen calculator for VT52 and VT100 terminals attached to RT–11, RSX–11M, or VMS systems. VTC provides trigonometric, logarithmic, and statistical functions; radix conversions; stack manipulations; and accessible memory registers under a reverse-Polish notation logic system. The stack registers *x*, *y*, *z*, and *t* are displayed and updated dynamically. The functions available, through three dynamic keypad displays, include:

SIN	SINH	SQRT	SUM +/−
COS	COSH	LN	MEAN
TAN	TANH	EXP	STD. DEV
ARCSIN	RAD↔DEG	LOG	BINOMIAL COEF.
ARCCOS	→POLAR	10**X	
ARCTAN	→RADIAN	X !	

Also available are functions that manipulate and selectively clear the *x*, *y*, *z*, and *t* registers; perform radix conversion between decimal, octal, hexadecimal, and an arbitrary radix; and display and access 36 memory registers.

A version of this product is available for the PDP–11 computer.

Price: $50
Contact: Dan Dill
(617) 353–4277
BOSTON UNIVERSITY
Chemistry Department
675 Commonwealth Avenue
Boston, MA 02215

Development Tools

Jeff Albertson/Stock, Boston

68000 Cross-Assembler Package

Operating System: VMS
Keywords: • Assemblers • Microprocessor development • Programming tools • Research

This package consists of the 68000 cross-assembler, the 68000 cross-linking loader, validation programs for installation, an installation guide, and a user's manual.

The instruction set is identical to the Motorola MC68000 manual. Extensions and optimizations of instructions simplify coding and make programs more intelligible, while occupying less memory. A loader handles displacements on external symbols. Segmentation supports control of code and data locations. Relocation and linking permit programs to be written in small modules. Listings show generated code and addresses. The package allows unlimited program size and number of symbols. A cross-reference shows each line that refers to each symbol. A file down-load is in standard Motorola format.

A version of this product is available for the PDP–11 computer.

Price: $1750 – $2500
Contact: Thomas F. Loschiavo, Marketing Manager
(215) 362–0966
ENERTEC, INC.
19 Jenkins Avenue
Lansdale, PA 19446

ACMS (Application Control and Management System)

Operating System: MicroVMS, VMS
Keywords: • Application development • Information management • Order entry • VAX Information Architecture

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RK07, RL02.

VAX ACMS simplifies the development and control of complex, on-line applications, including transaction processing, inventory control, order administration, and accounting applications. VAX ACMS can also be used to create the operational environment in which to run those applications. VAX ACMS reduces application development and maintenance time by replacing a significant amount of run-time parameters and application code with definitions stored in the VAX Common Data Dictionary.

An integrated member of the VAX Information Architecture, VAX ACMS stores its definitions in the COD and uses TDMS for menu processing. VAX ACMS also accesses DBMS and Rdb data bases, as well as standard VAX files.

Refer to SPD #25.50.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $9900 – $14,850
Contact: Consult your local DIGITAL sales office (see Introduction).

Aide-De-Camp™ Software Engineering Environment

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Information management • Language processors • Programming tools • Software utilities

Distribution medium: magnetic tape.

This system provides comprehensive change control and software information management facilities and supports medium- to large-scale development projects involving several developers and development sites. Features include a data base dictionary, on-line inquiry, report generation, annotated source listings, and a change-control mechanism. The system can be used to develop software written in any language. Software changes are treated as logical units that can be added to or subtracted from a named base version. New versions can serve as base versions for future development. The ADC system can maintain any number of versions or changes to a software project. Change control is effective across any files that make up a single software project.

The ADC system is written in C and is available on various machines and operating systems. The ADC system runs in approximately 200K bytes of memory. A system running ADC should have 1M byte of real memory. Pricing is set according to the size of the machine and the expected number of users. Support and training are available, as are documentation and demonstrations.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $42,000
Contact: Richard Harter, President
(617) 369–7398
SOFTWARE MAINTENANCE AND DEVELOPMENT SYSTEMS, INC.
P.O. Box 555
Concord, MA 01742

Amsterdam Compiler Kit

Operating System: Independent, ULTRIX–32
Keywords: • Compilers • Cross-compilers

Memory required: 1 megabyte. Distribution medium: 9-track magnetic tape.

This kit, written in C and developed by the University of Amsterdam, compiles C and Pascal programs on UNIX* 68000, 8086, VAX, and PDP–11 machines and can produce code as well. Cross-assemblers are also provided for 8080, Z80, Z8000, 8086, 6800, 6809, 68000, 6502, and PDP–11, as well as cross-interpreters for testing.

The kit includes a collection of programs designed to simplify the task of producing portable compilers and interpreters needed for micro- and minicomputers, the sources of all programs, and comprehensive internal documentation describing how to make the modifications necessary to add a new program language or a new target machine.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $9995
Contact: Joyce Bielen
(201) 985–8000
UNIPRESS SOFTWARE, INC.
2025 Lincoln Highway
Edison, NJ 08817

APDL (Advanced Program Design Language)

Operating System: VMS
Keywords: • Documentation • Programming tools • Project management • Source code control

Developed by Advanced Computer Concepts, this tool helps managers and programmers structure, document, review, and control software projects. APDL provides a uniform and complete design document for each project. Module designs are documented with text (narrative) and logic (pseudocode) segments. The module design descriptions are supported with data structure descriptions, indexes, cross-reference charts, a table of contents, and reports to support the design descriptions and aid system design, presentation, and analysis.

APDL helps ensure that the design is complete before coding starts. Use APDL as a basis for the source code documentation. Once the APDL design document is complete, incorporate the text and logic segments into the source code. Comment out the pseudocode or edit it into the source language. Later, compare the sources to the original design. Are there design changes? Why?

APDL supports reviews and walkthroughs, helps enforce your top-down design process, and works as a software design analysis tool.

A version of this product is available for the PDP–11 computer.

Price: $1250 – $4000
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

APPGEN (Applications Generator)

Operating System: UNIX* (Berkeley)
Keywords: • Application development • File management • Programming tools • Query facilities

If you develop or modify commercial software systems, APPGEN can increase your efficiency by 10 to 50 times. APPGEN is an interactive, menu-driven, fourth-generation language computer-aided applications generator environment. The system allows you to implement complex, transaction-driven, integrated commercial applications with virtually a limitless number of files, screens, menus, and reports.

APPGEN uses a nonprocedural English-language approach that does not require you to learn a new language. Because the system is developed through parameter tables, the applications work exactly the way they were designed. No program debugging is required.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $12,000
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APPGEN Query Language

Operating System: UNIX* (System III, System V)
Keywords: • Programming tools • Query facilities

The APPGEN Query Language is unique in that it is integrated into both the APPGEN Application Generator and the APPGEN-based Financial Series Applications. APPGEN Query is a true "fourth-generation" nonprocedural language featuring a natural, English-like command syntax with free-form sentence structure, enabling first-time and nontechnical users to easily carry out complex inquiry and reporting tasks. Even in installations with a sophisticated programming staff, APPGEN Query provides a powerful software tool that increases programmer productivity and decreases the need for ad hoc reporting programs.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $695
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

APTools (Applications Programming Tools)

Operating System: VMS
Keywords: • Application development • Data dictionary • Information management • Programming tools

This fully integrated applications development system, designed by Nikuv Computers Ltd., is intended for professional programmers and for the development of business and information management applications. APTools works in concert with procedural programming languages and supports BASIC, Pascal, and COBOL.

APTools combines a complete set of software development tools — the automatic generation of files, records, screens, reports and report schemas, queries, help messages, and functions — with a programming environment. Facilities in that environment provide the programmer and the application development manager with access control, dependencies management, documentation, versions and configurations, application installations, recovery, and security.

APTools resides on the VMS operating system and gives the developer access to the VMS architecture without leaving the APTools environment. APTools uses RMS to create files and develops applications that consist entirely of VAX (native-mode) executable images. Through an APTools utility, APTools data definitions can be interfaced to DIGITAL's CDD and DATATRIEVE. APTools supports VT100 (and compatible) terminal handling.

Price: $20,000 – $50,000
Contact: R. Thomas Rich
(617) 366–0800
MITCHELL MANAGEMENT SYSTEMS, INC.
Westborough Office Park
2000 West Park Drive
Westborough, MA 01581

BASIC Business Package

Operating System: VMS
Keywords: • Programming tools • Software utilities

This package contains a grab bag of utilities for general use after some modifications. Included is BASIC for RSX (or compatibility-mode VMS) from the RSX SIG tapes and several utility sets with their own documentation. Two business packages and a DBMS seed package in Pascal from the CP/M user group are included. The better package

includes G/L, A/P, A/R, payroll, and so on. Source files are present; binary files pertaining to CP/M have been generally excluded, although images of the CP/M floppies are provided, which can be used directly as those with THE BRIDGE.

The BASIC.MAC files are corrected by the .cmp files already and should be ready to build. The writeup with the kit describes where the submissions are.

The completeness, usability, or quality of the programs on the tape are not guaranteed. The material has not been checked or reviewed, and documentation may or may not be included. DECUS number 11–SP–54.

Restrictions: Some work will be needed to convert CBASIC and MBASIC dialects to DIGITAL BASIC.

Note: CPMUG Vol. 43 is not intact, and Vols. 43 to 45 only include most sources of the Osborn package. The Businessmaster II package is complete.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

Berkeley Softworks/Cross-Assembler

Operating System: ULTRIX–32, ULTRIX–32m, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Programming tools

Memory required: 100KB.

These cross-assemblers and linkers, designed to promote programmer productivity, provide a sophisticated cross-development environment for microprocessor software design. Cross-assemblers are available for the 65xx series, 68xx series, Z80, and 68000 microprocessors.

By expanding macros and assembling source code in a 1-pass approach, the cross-assemblers are five times faster than any other cross-assemblers (assembling up to 20,000 lines a minute). Other features are the automatic handling of external references, relocatable and absolute modes, full macro facilities, conditional assembly, a powerful expression evaluator, a wide range of pseudooperators, invocation options to control assembly, and compatibility with the UNIX* "make" facility.

The intelligent linker can incorporate the same expression evaluator as the cross-assembler does and can evaluate complex arithmetic or numeric expressions involving relocatable or external references. The linker opens the source module list files, replacing the relocatable and external values with absolute values. The resulting "absolute list files" are an invaluable debugging aid. The linker generates a final, executable object code file and a symbol table that is useful for symbolic debugging.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: Lee Llevano
(415) 644–0883
BERKELEY SOFTWORKS
2150 Shattuck Avenue, Suite 506
Berkeley, CA 94704

Berkeley Softworks/microPORT

Operating System: ULTRIX–32, ULTRIX–32m, UNIX* (Berkeley)
Keywords: • Debugging • Microprocessor development • Programming tools

This system integrates real-time, full-speed in-circuit emulation with sophisticated symbolic debugging capabilities and provides the user with complete and transparent control of the target processor for testing and debugging. The system features full symbolic assembly and disassembly for program patch and debug; single-step execution and single-step, full-speed subroutine execution; automatically updated status windows for variables and CPU registers; user-definable macros; a full C-like expression evaluator; a universal command structure to supported targets; and emulation RAM mappable anywhere in the target system's address space.

Debugging enables the user to set complex breakpoints on read/write or opcode fetch at any location or range, from code at any range of addresses, on specific values, and after a set number of occurrences.

The system supports 6502, 65C02, Z80, 8085, and 68000 processors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: Lee Llevano
(415) 644–0883
BERKELEY SOFTWORKS
2150 Shattuck Avenue, Suite 506
Berkeley, CA 94704

BSO/Assembler

Operating System: ULTRIX–32, VMS
Keywords: • Assemblers • Microprocessor development • Programming tools

This series of high-speed, relocatable assemblers performs rapid generation of machine code for microprocessors. By using a more powerful machine than the microprocessor, the programmer can take advantage of the higher speed, larger memory, more powerful editing capability, and high-speed peripherals of the host computer. BSO/Assembler features include multiuser capability, relocatable output capability, a 2-

pass assembler, symbol-passing capability, 32-bit addressing, 32-bit expression evaluation, cross-referencing, and a conditional assembly capability.

BSO/Assembler supports Intel 8086/88/186/188, 80187, 8087, 8085, 8051, 8048 series; Motorola 68000, 6800/01 series, 6805, 6809; Zilog Z80, Z8001, Z8002; Rockwell 6502 family; TI 9900–9995, 1000; RCA 1802–1805; and others.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800 or TWX: (710) 324–0760
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BSO/Debug (Microprocessor Symbolic Debuggers)

Operating System: ULTRIX–32, VMS
Keywords: • Assemblers • Debugging • Microprocessor development • Programming tools

BSO's microprocessor symbolic debuggers enable the microprocessor system designer to debug software in a protected real-time environment. The debuggers allow the user to take advantage of a larger computer, thereby reducing program development time.

Debugger features include software testing in a protected environment, multiuser capabilities, code in assembly language for speed and compactness, full symbolic capability, full and accurate clock cycle counting, symbol-passing capability, extremely flexible setting of trace/breakpoints, unlimited trace data recording, user-definable instruction constructs, and an in-line symbolic assembler/disassembler.

BSO/Debug supports Intel 8086/88, 80186/188, 8085, 8051, 8048 series; Motorola 68000, 6800 series, 6809, 6805; Zilog Z80, Z8000, Z8001, Z8002; Rockwell 6502; TI 9900, 1000; RCA 1802–1805; and others.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800 or TWX: (710) 324–0760
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BSO/Mlib (Microprocessor Program Librarian)

Operating System: ULTRIX–32, VMS
Keywords: • Microprocessor development • Programming tools

Libraries are created by storing frequently needed subroutines or program segments in encoded, relocatable form with Mlib. During linking, the needed libraries are specified with Mlink commands. The external references in the calling program are then automatically resolved by the linker.

If programs in the library reference each other, Mlink resolves those references as well. The referenced library program segments are automatically included in the final output object file with the correct relative addressing values.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800 or TWX: (710) 324–0760
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BSO/Mlink (Microprocessor Program Linker)

Operating System: ULTRIX–32, VMS
Keywords: • Assemblers • Mapping
• Microprocessor development • Programming tools

For multiple-module programming, BSO's assemblers can generate relocatable programs, which are then joined into one program with the supplied linker, Mlink. Modules in user-generated object libraries, in either relocatable or absolute format, can also be included. Mlink can link unlimited program modules, enabling the sophisticated programmer to write structured programs with many sections, each dealing with one task. Better documentation, fewer errors, and successful parallel programming should result. The output of Mlink is a program in absolute object format. Written in assembly language, the linker is faster than any other microprocessor program linker. Features of Mlink are high-speed performance, multiuser capability, library access capability, multiple levels of global nesting, mapping capability, symbol-passing capability, 32-bit addressing, and 32-bit expression evaluation.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800 or TWX: (710) 324–0760
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BSO/PLM

Operating System: ULTRIX–32, VMS
Keywords: • Compilers • Microprocessor development
Memory required: 128KB minimum.

Designed for microprocessor software development, this product offers the microprocessor system designer an optimizing compiler that permits fast program creation and adept handling of specialized microprocessor hardware/software interfacing. This multiuser optimizing system conforms to the ISO standard. Features include separate compilation, include statements, and ROM/RAM memory segregation. Extensive interrupt handling and strong type checking are included. The system uses special variables to permit easy handling of record files. The system can be linked with assembly language modules.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BSO/XL

Operating System: ULTRIX–32, VMS
Keywords: • Microprocessor development • Programming tools
Memory required: 64KB minimum.

This VAX/VMS Command Language Accelerator improves the processing speed of command procedures written in VAX Digital Command Language (DCL) and can reduce the overhead incurred by DCL procedures by 50%.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(617) 894–7800
BOSTON SYSTEMS OFFICE, INC.
469 Moody Street
Waltham, MA 02254–9164

BYRON®

Operating System: VMS
Keywords: • Compilers • Documentation
• Language enhancers • Programming tools

This package consists of a program development language (PDL) and a set of tools. The BYRON PDL supports software development from specification through maintenance. Taking advantage of the features of Ada, BYRON adds special constructs through which the software designer supplies information necessary to the implementer, tester, and maintainer. Because Ada comments are used, a single source file can be used throughout the life of the software, simplifying configuration management and making it easy to keep documentation up to date. In addition, productivity is increased by making it unnecessary to write something once in a program and once in its documentation. The BYRON document generator further increases productivity by producing many forms of documentation from any information expressed in BYRON.

BYRON includes two basic tools: the Analyzer and the Document Generator. The Analyzer checks source code for proper Ada syntax and semantics and BYRON comments for proper use of constructs. The Analyzer stores the result in a program library, which the BYRON Document Generator uses as a data base. The Document Generator functions as a text processor; collects information from many source files into a single, concise document; and derives and prints information that is not apparent from reading the source code.

BYRON provides four other tools. CallTree produces a document showing the procedures and functions that a given subprogram calls and is called by. Both direct and indirect calls may be shown, and each subprogram is described briefly. DataDict produces a document showing declarations of types, objects, subprograms, packages, tasks, and entries in any combination. Each declaration is described briefly, and the name and line number of the program unit that contains the declaration are given. DepTab produces a report showing the dependencies between program units in the library. Userman produces a document that describes the external interface to a package or subprogram in the program library.

Price: $50,000
Contact: Dr. William Toscano
(617) 661–1840
INTERMETRICS, INC.
733 Concord Avenue
Cambridge, MA 02138

BYTES

Operating System: VMS
Keywords: • Programming tools

Distribution medium: magnetic tape.

BYTES is a VAX–11 COBOL program that reads in other VAX–11 COBOL programs and counts the number of bytes used by the source program. The user is prompted to select the input file name.

Documentation is on magnetic media. DECUS number VAX–56.
Price: $5 – $225
Contact: DECUS (see Introduction)

C–32000 (C Cross-Compiler for National Semiconductor 32000)

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Compilers • Cross-compilers • Microprocessor development

This compiler, developed by Green Hills, conforms to the Kernighan and Ritchie specifications. C–32000 may be configured as a resident compiler or as a VAX cross-compiler. The compiler performs global optimizations that are commonly found on mainframe compilers — Register Allocation by Coloring, Very Busy Expression Analysis, Copy Propagation, Common Subexpression Elimination, and Strength Reduction — in addition to standard microprocessor compiler optimizations — folding constant expressions, conversion of multiplies to shifts whenever possible, elimination of redundant jumps, and unreachable code.

This compiler generates 30% less code than portable C compiler versions and provides complete Berkeley C compatibility; 1-pass design, with integrated preprocessor for maximum throughput; generated code that runs up to four times faster than portable C compiler code; extensive loop optimizations; advanced compiler techniques to reduce space; complete IEEE and DIGITAL floating-point support; and calling-sequence compatibility with all Green Hills compilers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.
Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

C–68000 (C Cross-Compiler for Motorola 68000/10)

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Cross-compilers • Microprocessor development • Source code control

Developed by Green Hills, this fully optimizing compiler for Motorola 68000–series microprocessors may be configured as a resident compiler or as a VAX cross-compiler. The compiler conforms to the Kernighan and Ritchie specifications and performs global optimizations normally

found in mainframe compilers — Register Allocation by Coloring, Very Busy Expression Analysis, Copy Propagation, Common Subexpression Elimination, and Strength Reduction — in addition to standard microprocessor compiler optimizations — folding of constant expressions, conversion of multiplies to shifts whenever possible, elimination of redundant jumps, and unreachable code.

This compiler generates 30% less code than portable C compiler versions and provides complete Berkeley C compatibility, 1-pass design with integrated preprocessor for maximum throughput, generated code that runs up to four times more quickly than portable C compiler code, extensive loop optimizations, advanced compiler techniques to reduce space, complete DIGITAL and IEEE floating-point support, calling sequence compatibility with all Green Hills compilers, and interfaces with OASYS M68000 Cross-Assembler Development System and other software development tools.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

C–ISAM™

Operating System: ULTRIX–32, UNIX* (Berkeley, System V)
Keywords: • Data dictionary • File management • Programming tools • Security

An invaluable programmer's tool, C–ISAM is designed for software products that require an indexed sequential-access method without the additional capabilities provided by a data base management system. An easy-to-use and consistent method of data management, C–ISAM also provides fast data retrieval, comprehensive data protection, and efficient data storage.

You can increase the speed of your application with C–ISAM's advanced data-handling techniques. The program's indexing structure provides fast data access and retrieval, regardless of the type or magnitude of request. Once your index file is created, you can read records by value, using a full or partial key. The program can locate a sequence of records quickly, since it is optimized for speed on next and previous retrievals.

The program provides flexible indexing capabilities. Each key can consist of one to eight record segments. The segments do not need to be in sequence within the record or be of the same data type. You can also specify any number of indexes for a single file and allow or disallow duplicate values for each index created.

With C–ISAM, you can reduce the disk space required for your application's files. You can specify leading duplicate characters, trailing blanks, and duplicate values be suppressed within the stored index value.

All C–ISAM files grow dynamically and reuse space left by deleted records. The index files are automatically updated and balanced every time a data file modification occurs.

File-locking procedures ensure data integrity in the most active multiuser environments. You can request that C–ISAM lock an entire file or just the current record when retrieved. Or, if you need to lock several records concurrently, locking can be controlled by your application.

You can specify transaction audit trails for files. Those audit trails are invaluable when your application's recovery routines must be invoked due to a system malfunction.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $900 – $1800

Contact: Sales Department
(415) 424–1300
RELATIONAL DATABASE SYSTEMS, INC.
2471 East Bayshore Road, Suite 600
Palo Alto, CA 94303

C–LANDS (68000/68010 C Language Development System)

Operating System: VMS

Keywords: • Cross-compilers • Language processors • Microprocessor development • Programming tools

This package, which supports the entire software design cycle, consists of the C Language Directed Editor (LDE), the 68000/68010 C Compiler with the Integrated Control System (ICS), and the 68000/68010 C Debug. Also included is a 68000/68010 assembler, linker, library generator, lister, and cross-reference lister.

The Language Directed Editor combines the text-manipulation functions of a general-purpose editor with the syntax-checking function of a compiler. You can check the syntax of your C program without repeated compiler passes.

The 68000/68010 C Compiler with ICS translates statements written in C to object code for the 68000 and 68010 processors. The Tektronix C Compiler implements the C programming language as described by Kernighan and Ritchie. The ICS automates the integration of the software written in C with the hardware specifications of the prototype. From a list of user-supplied parameters in an ICS source file, the ICS program generates the interface code for memory configuration, interrupt handling, and interrupt and program initialization.

The 68000/68010 C Debug is a real-time symbolic debugging tool for programs written in C. C Debug (CDB) allows the programmer to use C constructs to display and modify variables, control program execution, and record and display debug information.

Price: $15,000
Contact: Local Tektronix Representative
—
TEKTRONIX, INC.
Walker Road Industrial Park, P.O. Box 4600, MS 92–635
Beaverton, OR 97075

CADS (Computer Analysis and Design System)

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Communications • Networking • Operating systems • Simulation

CADS is a computer system modeling package for capacity planning, configuration management, and performance-oriented design. CADS uses an analytic solution technique that is extremely rapid, allowing interactive evaluation and display. CADS operates on all systems with an ANS–1966 (or ANS–1977) FORTRAN compiler and a user-program address space of one megabyte.

CADS provides an interactive user-friendly dialog and a batch interface. Models may be defined and evaluated hierarchically. The user describes the hardware and workload in terms of a few parameters obtainable from hardware or software monitors or accounting packages.

CADS is general and flexible and is designed for modeling computer systems in general, not for a single vendor's mainframes. The CADS source code is provided to its user and is parameterized; the user may specify the value of all run-time limits (maximum numbers of job classes, queues, and so forth).

CADS runs on most mainframes and large minicomputers; the CADS models developed by the user are stored as text files that may be transported easily from one type of computer system to another. CADS may be used to analyze most computer or communication systems. Additional purchases by an organization are significantly discounted, and free documentation and hot-line services are included.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $6500
Contact: Doug Neuse
(512) 474–4526
INFORMATION RESEARCH ASSOCIATES
911 West 29th Street
Austin, TX 78705

camic | s (Computer-Aided Microprocessing)

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Cross-compilers • Microprocessor development • Pre- and postprocessors • Text management

As a universal development system for microprocessor software, camic | s can be used for all microprocessors on the market; it can be configured to suit all users and their processors.

All products of the software life cycle (documents and programs) are held in a project library, providing access to all information and supporting quality assurance and data security. The system offers Pascal and C cross-compilers with run-time libraries and cross-assemblers for Intel, Motorola, and Zilog processors.

The system includes an efficient test system that supports software testing on a functional level — automatic creation of test frames, assertion processing, and measurement of test coverage — and symbolic debugging with integrated in-circuit emulators.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: DM 60.000 – DM 120.000
Contact: Mr. Feigelbinder
49–089 92 52 – 2 31
SOFTLAB GMBH
Arabellastrasse 13
8000 Munich 81, Bavaria
West Germany

CCC™ (Change and Configuration Control)

Operating System: ULTRIX–32, VMS
Keywords: • File management • Software utilities • Source code control • Text management

Distribution medium: magnetic tape.

CCC provides a comprehensive change control environment and offers a full configuration control environment. CCC controls who can make changes; it can handle source code, object code, test data, and documents and can deal with many languages. The program's comprehensive features include automatic reconstruction of previous versions, problem tracking, difference reports, management reports, access control, archiving, compression, encryption, and automatic recovery. CCC is an interactive tool with an easy-to-use interface, on-line help, and interactive tutorials.

A configuration embodies the popular concept of a version. The configuration control power of CCC is due to its support of multiple configurations and its implementation of virtual configurations, resulting in major space savings. Further, the user can operate on configurations as a whole, rather than component by component.

CCC is a stand-alone component of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

CDEBUG (C Symbolic Debugger)

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Debugging • Microprocessor development • Pre- and postprocessors

CDEBUG, developed by Complete Software Inc., is a powerful, highly interactive tool for symbolically debugging C source code routines. CDEBUG can access, modify, and examine all C elements — for example, globals, locals, pointers, structures, and arrays — by name and type. CDEBUG, designed to operate independently of the host operating system and hardware, uses its own preprocessor to incorporate symbol tables directly into the source code to be debugged, thereby eliminating dependence on the host C compiler. With its unique menu-driven and command line approach to debugging, CDEBUG is both fast and easy to learn.

CDEBUG is fully C supported as specified by Kernighan and Ritchie and supports floating-point operations. Debugger commands conform to standard C notations. An unlimited number of breakpoints can be set on statement, function, and block levels. Watchpoints and tracepoints are supported. Journal files can be used as a command file in playback mode.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

CDL2 Laboratory

Operating System: VMS
Keywords: • Compilers • Programming tools • Source code control

Distribution medium: 9-track 1600 bpi magnetic tape.

This multiuser programming support system serves the systems implementation language CDL2. The laboratory supports the development of modular and efficient software and the porting of that software to different computers.

Program parts and information are kept in a hierarchical project data base. Information input, modification, and retrieval are supported by a general selection mechanism that simplifies and unifies the work.

Project organization can be adapted to different models. CDL2 Laboratory is oriented toward programmers and groups centered on libraries. Module development and program integration are separate tasks.

Input and modification are carried out at the terminal, using a syntax-driven editor, which immediately recognizes mistyped words, while incomplete and incompatible parts can be resolved stepwise, according to the development stage. Automatic prettyprinting increases the readability of programs.

Before programs are tested, a thorough static semantic analysis reveals errors in the flow of control and data. A source-oriented debug system helps to detect errors in the design and algorithmic formulation.

CDL2 Laboratory strives for program development speed, easy compilation, and quality generated code. For testing, modules can be compiled separately and unoptimized and instrumented. For production purposes, modules can be integrated across their boundaries. To meet time and space requirements, code segments and overlays can be formed independently of the source module structure.

Price: Available upon request
Contact: Hartmut Feuerhahn
+49–30–3419008
EPSILON
Otto-Suhr-Allee 22
D–1000 Berlin 10
West Germany

CDOC — C Source Code Format Utility

Operating System: Independent
Keywords: • Source code control • Text management

Available in source and object formats, CDOC is used to format C or Pascal source file listings. Control information is embedded directly into the source text as legal comments (for example, /* ... */). CDOC scans the source code for control commands prior to printing and controls page breaks, titling, primary and secondary page headings, and indentation. Sections of source files may be automatically extracted for inclusion in other files. CDOC is useful in updating/writing functional specifications.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

CLUE™ (C (Source Level) Linecount Utility)

Operating System: ULTRIX–32, UNIX* (Berkeley, System V), VMS
Keywords: • Debugging • Microprocessor development
• Programming tools

CLUE is used by software engineers as a profiler, debugging tool, and aid to C program verification. CLUE Profiler is available in binary or source formats.

CLUE finds where a C program spends its time and resources during execution by recording the frequency of execution of each C statement (or line). After each run, CLUE can be used to generate tailor-made statistical reports and graphs (histograms).

CLUE features a comprehensive set of report generators and report "filters" that enable a user to find time- and space-critical sections of code. CLUE also features a function trace tree, detailed resource utilization statistics (CPU and I/O), and time performance functionality. CLUE may be used as a debugging tool by tracing execution paths. As a verification aid, CLUE shows how effective test programs really are in exercising a target C program.

CLUE can be used with all C compilers that conform to the standard as described by Kernighan and Ritchie; has a built-in C preprocessor that prepares code for compilation with the host computer's C compiler; includes an easy-to-use command language; incorporates a C source code line count profiler that selects ranges by C function, all or a range of lines within a function, and all lines except those in selected functions; and provides command descriptions in UNIX* manual style.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

COBOL Documenter A

Operating System: ULTRIX–32, VMS
Keywords: • Documentation • Source code control

Distribution medium: magnetic tape.

The Documenter A aids and expedites the methodical and uniform documentation of source program units. This compiler-independent tool provides two basic facilities. The first is a mechanism for generating source program documentation units in the format of a template predefined by the user. Source programs are coded in a straightforward, succinct form and are presented to Documenter A for automatic expansion into a complete documentation unit as detailed in the predefined template. The second facility permits the relocation of source statements from their coded location to any other location within the source text.

This tool serves as an excellent quality assurance instrument that allows management to set, facilitate, and enforce source program documentation standards. This product, also available for a number of other programming languages, is a member of SOFTOOL,® an integrated set of software tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

COBOL Interface Documenter

Operating System: ULTRIX–32, VMS
Keywords: • Programming tools • Source code control
Distribution medium: magnetic tape.

This software product accepts as input a collection of object modules and automatically generates clear information indicating all interfaces between the object modules. For each module, the interface documenter produces an annotated list of the modules it references, as well as a list of all the modules that reference it. External data items are also documented. This easy-to-use product accepts as inputs the same object modules that are normally presented to your linker (binder). Thus, in order to generate the interface documentation, you submit your inputs to the Interface Documenter instead of to the linker (binder).

This product, also available for a number of other programming languages, is a member of SOFTOOL,® an integrated set of tools for software development, management, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

COBOL Optimization Instrumenters

Operating System: ULTRIX–32, VMS
Keywords: • Programming tools • Source code control
Distribution medium: magnetic tape.

These three tools automatically generate program, paragraph, and statement-level execution-time profiles (reports) of programs. The profiles quantify optimization efforts in detail, showing absolute and relative execution times for programs, paragraphs, and statements, as well as frequency counts and optimization indices. Instrumenter I operates at the program level; Instrumenter II, at the paragraph level; and Instrumenter III, at the statement level. No modification of any compiler or application program is required. The tools accept as input source programs and test data and output clear profiles. These tools permit top-down optimization in a natural manner.

The Optimization Instrumenters possess a strong management orientation and can have much impact in properly focusing optimization efforts. The tools serve as an excellent quality assurance facility that allows management to set, facilitate, and enforce optimization standards. These products, also available for a number of other programming languages, are members of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

COBOL Recommended Preprocessor

Operating System: ULTRIX–32, VMS
Keywords: • Pre- and postprocessors
Distribution medium: magnetic tape.

This preprocessor, built with the aid of the Structurizer tool and recommended by Softool Corporation, is the result of extensive programming experience and includes error-preventing features. The Recommended Preprocessor is a member of SOFTOOL,® an integrated set of software tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

COBOL Structurizer

Operating System: ULTRIX–32, VMS
Keywords: • Language enhancers • Pre- and postprocessors • Programming tools

Distribution medium: magnetic tape.

The Structurizer allows a user to generate custom-made preprocessors that augment COBOL with control structures defined by the user. This tool, a key to the implementation of an effective structured language facility, is also available for a number of other programming languages. The Structurizer is a member of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

COBOL Testing Instrumenters

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools • Quality control • Source code control

Distribution medium: magnetic tape.

These three tools automatically generate program, paragraph, and statement-level execution-time profiles (reports) of programs. The profiles quantify test coverage and test effectiveness in detail: Instrumenter I operates at the program level; Instrumenter II, at the paragraph level; and Instrumenter III, at the statement level. No modification of any compiler or application program is required. The tools accept as input source programs and test data and output clear profiles. The Instrumenters permit top-down testing in a natural manner.

These products possess a strong management orientation and can minimize the cost of testing. They serve as an excellent quality assurance facility that allows management to set, facilitate, and enforce testing standards. These products, also available for a number of other programming languages, are members of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

COBOL Tracing Instrumenters

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools
Distribution medium: magnetic tape.

These three tools automatically document the path of program, paragraph, and statement flow of control. Instrumenter I operates at the program level; Instrumenter II, at the paragraph level; and Instrumenter III, at the statement level. They offer the software professional a flexible, consistent, and easy-to-use tracing facility. No modification of any compiler or application program is required. The tools accept as input source programs and test data and output clear trace documentation (profiles) formatted and indented to facilitate understanding. The tools permit top-down tracing in a natural manner.

These products, also available for a number of other programming languages, are members of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

CoCo (Configuration Control Menu System)

Operating System: ULTRIX–32, UNITY, UNIX* (Berkeley)
Keywords: • Project management • Quality control
Distribution medium: 1600 bpi magnetic tape.

This interactive, menu-driven project management tool under UNIX* helps a manager assign and evaluate software project change requests. Communication among members of a project and other interested departments is systematically facilitated and coordinated, using the UNIX* electronic mail facility.

CoCo is easily customized by anyone who can program in UNIX* Bourne Shell. (The Menu/Shell is an extension of the standard Bourne Shell.) An example of extending a CoCo form to accommodate the requirements of the customer's project is provided.

On the PDP–11, CoCo runs under UNITY Releases 2.8–2.10; on the VAX, under Releases 0 and 2 and under Berkeley 4.2 BSD.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Sales Department
(416) 922–1937
HUMAN COMPUTING RESOURCES CORP.
10 St. Mary Street, Fourth Floor
Toronto, Ontario M4Y 1P9
Canada

Code and Comment Line Counters

Operating System: VMS
Keywords: • Source code control

Distribution medium: magnetic tape.

These two programs read FORTRAN or MACRO source files (essentially any FORTRAN source or any assembler source for which the comments follow the same rules used in MACRO–11 and VAX–11 MACRO). The programs report the number of lines in the source, the number of lines of code, the number of comments, and the number of code lines with comments.

Documentation is on magnetic media. DECUS number VAX–51.

Price: $5 – $225
Contact: DECUS (see Introduction)

COGEN

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Data entry • Source code control

By responding to simple menus, prompts, and data screens, COGEN users can quickly produce modular, self-documenting, and bug-free COBOL business application programs. Using advanced "screen painting" techniques, an integral data dictionary, and a flexible report-definition screen, COGEN speeds software development, imposes coding standards, and creates easily maintainable, portable code.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $950 – $7500
Contact: Ruth Deiches
(415) 527–1157
BYTEL CORP.
1029D Solano Avenue
Berkeley, CA 94706

ColorKey + User Interface

Operating System: Independent, VMS
Keywords: • Computer-aided instruction • Education
• Microprocessor development • Programming tools

This push-button interface introduces new users to Tektronix VAX software tools, Tektronix 8540 Integration Unit and hardware tools, and the VAX operating system. ColorKey+ provides "Intelligent Keys" — input parameters to a command are learned on available function keys. The next time the command is invoked, the learned softkeys may be used instead of typing parameters. ColorKey+ also provides an editable history that saves your command history and allows editing of saved commands. Instant mapping shows your location in the ColorKey+ hierarchy of commands.

VAX ColorKey+ includes support for all VAX software products and the 8540 IU and hardware tools.

Price: $1500
Contact: Local Tektronix Representative
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TEKTRONIX, INC.
Walker Road Industrial Park, P.O. Box 4600, MS 92–635
Beaverton, OR 97075

Command Recognizer Routines for VAX

Operating System: VMS
Keywords: • Application development • Programming tools

This tool allows VAX BASIC programmers to quickly develop multifunction command-driven programs in BASIC to define a set of English-text commands and to insert routines to process each command. The command-recognition function enables a user to abbreviate commands by the first or first few letters of a command or by the first letter of each word of a command. The software is written in VAX–11 BASIC Version 2.4 but could easily be converted to BASIC–PLUS–2 or Version 2 BASIC. DECUS number VAX–102.

Price: $5 – $225
Contact: DECUS (see Introduction)

Control C and Exception Trap Mechanism for VAX FORTRAN

Operating System: VMS
Keywords: • Debugging • Programming tools

Distribution medium: magnetic tape.

T$RAP is a FORTRAN-callable routine that intercepts ^C interrupts and program exceptions. The T$RAP is set up by the FORTRAN statement CALL T$RAP (&line #, IERR), and program flow continues normally until ^C is typed or a program exception occurs. If a T$RAPpable condition occurs, program flow will be redirected to "line #", the T$RAP will be removed, and the Error Code will be inserted in INTEGER*4 variable IERR. The T$RAP will be canceled if routine UNT$RAP is called, another T$RAP is inserted, a T$RAP occurs to "line #", and the routine calling T$RAP issues a RETURN.

T$RAP calls (undocumented) FORTRAN routine FOR$10–END, to avoid I/O recursion errors. Recursion-type errors still occur if the OPEN statement fails. T$RAP plays with stack frames in an unusual manner.

Documentation is on magnetic media. DECUS number VAX–29.

Price: $5 – $225
Contact: DECUS (see Introduction)

CORTEX Application Accelerator

Operating System: VMS
Keywords: • Compilers

This software, an optional module to the CORTEX Application Factory and Builder application development tools, optimizes application performance by providing extremely fast computer run time, greater machine efficiency, and high-volume productivity. The accelerator also allows optimized applications to be moved to other computers having the same operating system for on-line, multiuser environments.

Price: $15,000
Contact: Lynn Hearl
(617) 894–7000
CORTEX CORP.
128 Roberts Road, Technology Center
Waltham, MA 02154

CORTEX Application Factory

Operating System: VMS
Keywords: • Application development
• Information management • Language processors
• Programming tools

This application generator automates the development of medium to large multiuser information management applications for VAX/VMS systems. This integrated productivity tool includes a very high-level language and is a general replacement for COBOL. Systems analysts use this tool to compress months of development time into days. Applications are built by specifying options through a 2-way dialog at the CRT. From specifications, this development system constructs operational applications complete with screens for data entry/update/retrieval, reports, computations, and data management.

During development, action diagramming complements the addition of procedural code. The action diagrammer automatically maps the logical flow and checks for valid syntax and data fields as each line of code is entered. Coding errors are highlighted and can be corrected on entry.

The Application Factory produces the I/O routines and makes the logical links between related data items. Data entry validation and access to related data across data files are thus provided automatically. Application system documentation is also automatically generated by using the many Factory system reports, which accurately reflect the application design status at all times, since they are derived from the on-line Factory specifications. Factory-built applications are consistent, standardized, well structured, and well documented.

A graphics option for producing presentation-quality graphics is fully integrated with the Application Factory. Developers prespecify data, or end users can enter data interactively for easy preparation of standardized or customized charts from 18 design templates. Eight color and six lettering-style options are available, as well as cursor-controlled floating-text capability.

Price: $15,000 – $28,000
Contact: Lynn Hearl
(617) 894–7000
CORTEX CORP.
128 Roberts Road, Technology Center
Waltham, MA 02154

CPG (COBOL Program Generator)

Operating System: MicroVMS, VMS
Keywords: • Data base management • Data dictionary • Programming tools • Report writer

CPG produces transportable ANSI '74 COBOL source code more quickly than conventional programming/coding methods do and alleviates long development time and resulting backlogs, the high cost for a debugged line of code, residual bugs, varying programming/coding styles, costly analyst-programmer coordination, the expense of programmer terminals, as well as the difficulty of recruiting skilled programmers. Major modules in the generator include a data dictionary, a screen generator, and a report generator.

The data dictionary stores file definitions, validation rules, help and error messages, and file-updating procedures. File definitions, select statements, and file-allocation command files can be created automatically. Help and error messages are carried forward automatically to any generated program using that file.

A program's design features single screen/single function, multiscreen/multifunction, CICS, simulated block mode, or DBMS, and the user can access programs from easily created menus. CPG generates programs for fully formatted reports through simple question-and-answer sessions and is completely interactive. The report writer features multifile access and updating, up to 20 control breaks, sorting of fields in ascending or descending order, summaries on control breaks, and plotting of summarized data.

Price: $30,000
Contact: Paula Price
(412) 787–5100
DAVID R. BLACK & ASSOCIATES
Penn Center West, Suite 320, Building 1
Pittsburgh, PA 15276

Cross-Assembler Support

Operating System: VMS
Keywords: • Assemblers • Microprocessor development • Programming tools

Tektronix cross-assemblers are available for the Z80/NSC800, 8085, 6809, 68000/68010, and 8086/80186 microprocessors. Tektronix assembler packages consist of an assembler for the specific microprocessor, linker, lister, cross-reference lister, and a library generator. Each assembler package has identical operational characteristics for each supported microprocessor, making it easy to move from one microprocessor to another.

Tektronix assemblers offer advanced programming features, such as macros and conditional-assembly directives.

Price: $2500
Contact: Local Tektronix Representative
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TEKTRONIX, INC.
Walker Road Industrial Park, P.O. Box 4600, MS 92–635
Beaverton, OR 97075

CUPL (Universal Compiler for Programmable Logic)

Operating System: UNIX* (Berkeley), VMS
Keywords: • CAD/CAM • Compilers • Electronic • Simulation

Memory required: 256K RAM. Distribution medium: 9-track magnetic tape.

This universal design and test software system, written in C, is for the application of programmable logic devices. The high-level language compiler features Boolean syntax, truth table syntax, and state machine syntax. The simulator includes three levels of trace, exercise test vectors, fault grading, and device propagation delay modeling.

A logic minimizer and a PALASM-to-CUPL source translator are included.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $2695
Contact: Robert J. Reynolds
(408) 942–8787
ASSISTED TECHNOLOGY
2381 Zanker Road, Suite 150
San Jose, CA 95131

Debug80

Operating System: VMS
Keywords: • Debugging

Memory required: 130KB. Distribution medium: magnetic tape.

Debug80, a powerful debugger for assembly language programs, was designed primarily for 8080/8085 microprocessors, then adapted to the VAX–11/780 system, and is now oriented to CRT screen terminals. The program displays all CPU registers, current instruction, and a menu of commands. DECUS number VAX–69.

Restrictions: Pascal features are not supported on pre–VMS 3.2 versions.

Price: $5 – $225
Contact: DECUS (see Introduction)

DEBUG/RT (Debugger)

Operating System: ULTRIX–32
Keywords: • Debugging • Diagnostics
• Microprocessor development • Simulation

DEBUG/RT is an advanced debugger designed to work with OS/RT, Destek's real-time, multitasking operating system kernel. DEBUG/RT is used to debug the OS/RT customer's user processes (application code) and on OS/RT itself if custom changes to the OS are being implemented. DEBUG/RT will allow access to control blocks from resources normally hidden from the user, the interception of interrupts, and the simulation of external events. A version of the Debugger is also available to work with Destek's series of optimized cross-compilers for VAX and PDP–11 minicomputers that produce 68000, 8088/86/186, Z8000, and Z80.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Dennis Rieger
(408) 737–7211
THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

DEC/CMS (Code Management System)

Operating System: MicroVMS, VMS
Keywords: • File management • Programming tools • Source code control • VNX

VAX DEC/CMS, a program librarian for software development and evolution, is comprised of a set of commands enabling software developers to manage the files of an ongoing project. DEC/CMS stores ASCII text files in a project library; retrieves previous file generations; obtains a report of file modification, including when, why, and by whom the modification was made; determines the origin of each line of a file, either as an annotated listing or as comments in the file; manages concurrent modificatins and merges separately developed modifications; stores related files together as a single element; and relates the generation of one element to the corresponding generations of other elements.

Refer to SPD #25.52.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $867 – $13,000
Contact: Consult your local DIGITAL sales office (see Introduction).

DEC/MMS (Module Management System)

Operating System: MicroVMS, VMS
Keywords: • Programming tools • VNX

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

This software tool enhances programmer productivity by determining what components in a software system have changed and by rebuilding the system in an optimal way. VAX DEC/MMS determines which modules need to be recompiled and ensures that the software system is recompiled and linked with all the latest changes. VAX DEC/MMS can interact with VAX DEC/CMS (Code Management System) to provide an enhanced software development package.

Refer to SPD #26.03.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $210 – $3150
Contact: Consult your local DIGITAL sales office (see Introduction).

DECtalk Application Support Library

Operating System: VMS
Keywords: • Application development • Simulation • Software utilities • Telecommunications

This extensive collection of subroutines, written in C, simplifies application development. The library includes subroutines to carry out DECtalk-specific functions, such as answering the phone, as well as low-level operating system–specific functions, such as generating and parsing escape sequences.

Several simple application programs are provided, including the DECtalk telephone demonstration program and a "spoken fortune cookie" program. Other sample programs are written in BASIC–PLUS and COBOL for RSTS/E. Also provided are source modules, including several operating system–specific libraries also distributed with C Language System (DECUS number 11–SP–18).

The VAX distribution contains source files and executable code; the PDP–11 distribution contains only source modules. UNIX* installations should obtain the PDP–11 distribution and make their own arrangements for tape file format translation. DECUS number 11–SP–58.

Restrictions: UNIX* systems may have release-specific code. PDP–11 and compatibility mode implies DECUS C, DECUS number 11–SP–18.

Note: VAX users should refer to DECUS number V–SP–20; UNIX* users, to DECUS number 11–SP–58.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

DEC/Test Manager

Operating System: MicroVMS, VMS
Keywords: • Diagnostics

Distribution media: 9-track 1600 bpi magnetic tape, RL02, RX01, RX50, TU58 DECtape II cartridge.

VAX DEC/Test Manager helps you to test software during development and maintenance. This tool automates the organization, execution, and review of tests and allows several developers to use one set of tests at the same time.

VAX DEC/Test Manager helps you as you implement assigned tasks, integrate your code, and maintain your software. This tool is based on the concept of regression testing. Established software *v*-tests are run, and the results are compared against expected results. If the two do not agree, the software is considered to have "regressed," indicating that it may contain errors.

With VAX DEC/Test Manager, you can describe your tests, organize them by assigning them to groups, and choose combinations of tests to be run by test name or by group. The product executes the tests you select and compares the results with the expected results. You may choose to run different combinations of tests simultaneously, and, of course, you can always run all the tests in the test system.

After test execution, a summary of the test status is provided. Test results can be viewed interactively to evaluate the test run and the results used in determining whether to make modifications to your code.

Refer to SPD #26.68.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $150 – $12,000
Contact: Contact your local DIGITAL sales office (see Introduction).

DYADS (Dymaxion Application Development System)

Operating System: VMS
Keywords: • Data base management • Data dictionary • Programming tools • Report writer

Distribution medium: 9-track magnetic tape.

DYADS provides tools in five areas:

- Data base structure — one master file, network of lists, hashed entries, and 15 field types
- Utility programs — menu, change list size, batch update, plus maintenance and support programs
- Report generator — external file and/or data base lists in a single report, multilevel reports, compute variables, select conditions, and five levels of totals
- Envelope programs — master programs require appending of only brief user-code section to perform updates, displays, and so on
- Programming and testing — a library of more than 250 modules, including a BUILD procedure and automatic testing and installation procedures

A version of this product is available for the PDP–11 computer.

Price: $20,000
Contact: Robert Brown
(902) 429–3175
DYMAXION RESEARCH LTD.
Box 1053, Armdale Station
Halifax,.Nova Scotia B3L 4L5
Canada

Dynamic Linking Loader for VAX/VMS

Operating System: VMS
Keywords: • Down-line loading • Programming tools

This dynamic linking loader is similar in concept and implementation to the dynamic loader available under the MTS system. Unlike the implementation of the MTS linking loader, however, there is no "merge" option; hence, COMMON regions cannot be used to communicate between the main program and the dynamically linked subroutine. The only direct communication allowed is through the subroutine argument mechanism.

The sources for the linking loader exist as four files. The run-time execute routine is contained in file EXECUT.MAR. This documentation file is in file DYNAM.DOC. Object code must be relocatable.

Documentation is on magnetic media. DECUS number VAX–30.

Price: $5 – $225
Contact: DECUS (see Introduction)

EasyEntry Forms Management and Data Entry System

Operating System: VMS
Keywords: • Data entry • Forms management • Programming tools

Distribution media: magnetic tape, RX50.

This full-screen forms management and data entry system allows on-screen design and implementation of data entry applications, eliminating such time-consuming steps as forms layout, coding, compiling, and testing. Once forms are designed, they are ready to be completed, using a fill-in-the-blank technique. EasyEntry supports high-volume data entry on a variety of CRT terminals while imposing relatively low overhead.

EasyEntry provides functions that may be performed on the input fields, including range and validity checks, arithmetic calculations, automatic duplication of fields, batch totals, and specification of additional attributes, such as overpunch signs, left-zero fill, and dates. Other features include table lookup, rekey verification, error messages, field- and form-level help facilities, operator statistics, split-screening, program calling, and forms-chaining. EasyEntry supports special display attributes of terminals, such as bold, blinking, and color.

A version of this product is available for the PDP–11 computer.

Price: $995 – $4400
Contact: Elizabeth F. Epermanis
(919) 942–7801
APPLIED INFORMATION SYSTEMS, INC.
500 Eastowne Drive, Suite 207
Chapel Hill, NC 27514

EasySpec™

Operating System: MicroVMS, VMS
Keywords: • Application development • Data base management • Data dictionary • Programming tools

Distribution medium: magnetic tape.

EasySpec is an automated development aid that helps you to design and develop data base applications. EasySpec automates the definition of user requirements; helps design, optimize, and normalize data base structures; generates the data base specifications for conventional files

and network (CODASYL) data base management systems, including Rdb, DBMS, IDM (Britton-Lee), INGRES (Relational Technology), ORACLE (Oracle), and others; and provides a data dictionary to support the definition of user requirements and the generation of the DBMS-specific data base design.

The major components of EasySpec are the requirements processor, the data base designer, and the data dictionary:

- The user-requirements processor automatically and methodically incorporates the requirements into the central requirements data base, which maximizes your control and minimizes your administrative chores. EasySpec maintains this component concurrently with the analysis process. You can generate requirements specification reports at any time. EasySpec can completely analyze the data elements and their relationship at any time to help you instantly spot omissions and incomplete specifications.
- The data base designer automatically generates and optimizes the data base design. The data base structure is normalized to "third normal form" according to relational data base design concepts.

  A complete DBMS-specific design can be automatically generated for input into your data management system, as well as graphs and data base structure reports that can be the keystone for both routine maintenance and new development projects.
- The data dictionary stores the description of data elements and their associated validation rules and characteristics. The data dictionary provides a complete spectrum of reporting, cross-referencing, and inquiry capabilities.

Price: $6000 – $10,000
Contact: Anthony A. Lekkos, Ph.D.
(713) 480–3233
EASYSPEC, INC.
17629 El Camino Real, Suite 202
Houston, TX 77058

Enforcer I

Operating System: Independent
Keywords: • Documentation • Programming tools • Quality control • Source code control

Memory required: 276K.

This automated COBOL quality assurance monitor, written in COBOL, examines COBOL coding, identifies deviations from company standards, and includes a metrics portion that evaluates both functional complexity and coding clarity. No interruption to the programming process is noticeable. This effective monitoring will increase programming productivity. Enforcer I can be tailored.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $9600
Contact: Jerry Sitner
(212) 254–3358
CLARITY CONCEPT SYSTEMS CO.™
14 Washington Place
New York, NY 10003

epsitool:assemble

Operating System: VMS
Keywords: • Assemblers • Cross-compilers
• Microprocessor development

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This series of absolute 2-pass assemblers for microprocessors combines high performance (2000 lines/minute on a VAX–11/780) with features for assembly control and listing production. The syntax of assembler directives, expressions, radix operators, and more is patterned after the DIGITAL MACRO style.

The epsitool:assemble assembler features symbols of arbitrary length in upper- and lowercase; decimal, binary, octal, and hexadecimal numbers, as well as 1- and 2-character ASCII character constants; expressions comprised of symbols and numbers, using operators; and bracketing. Also included are assembler directives for location counter control, data definition, listing control, source text inclusion, conditional assembly, and global symbol definition. The latter provides for separate assembly, using the global definitions in subsequent assemblies. Instructions of the target processor and address modes are supported.

The assembler listing states date and time of assembly, lists the source instructions and their translation, and contains a symbol table and, optionally, a cross-reference list.

The object code is Intel Hex format, Motorola S-record format, or MINIMIC format.

The following microprocessors are covered: Intel 8080, Motorola 6800/01/04/09, Zilog Z80, and MOS Technology 6502. Assemblers for other processors can be generated on demand.

A version of this product is available for the PDP–11 computer.

Price: $1200 – $2200
Contact: Hartmut Feuerhahn
+49–30–3419008
EPSILON
Otto-Suhr-Allee 22
D–1000 Berlin 10
West Germany

Fargo Forms and Screen Package

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Forms management • Menu handlers

This package, known as CIO, makes menus and screens easy to build. CIO consists of more than 40 functions written in C language, allowing you to put up menus, process choices, specify data types, and do error checking. Data types supported are short, long, float, double, string characters, date, time, and telephone. Curses, a public domain screen package developed by the University of California at Berkeley, is used as the base to make screens terminal independent.

This package is sold in source form only. Source includes complete user documentation, manual pages for each function, and several sample programs, such as a working mailing-list system.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $1000 – $5000
Contact: Fred Potthoff
(612) 941–9470
FARGO ELECTRONIC SERVICES, INC.
7150 Shady Oak Road
Eden Prairie, MN 55344

FEPCM Software Tools Kit

Operating System: VMS
Keywords: • Application development • Communications • Device drivers/handlers • Down-line loading

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This package of software modules helps a user develop applications for the FEPCM front-end processor system. The kit can be used in two ways; in either case, the user must also write a VAX/VMS application task to communicate with the VMS Bridge Driver.

The FEPCM Software Tools Kit contains five modules:

- The VMS Bridge Driver provides access to the FEPCM system through the VAX/VMS Queue I/O system service. The driver initiates transfers by issuing commands to the front end.
- The Front-End Bridge Driver provides access to the FEPCM system for the VAX/VMS user through the bridge interface. Access for the RSX–11 user is provided by the RSX–11 Queue I/O directive.
- The Front-End Template I/O Driver provides an example of how to write a front-end driver to support the functions of the VMS Bridge Driver.
- The Front-End Template User Task provides an example of how to write a front-end task to handle I/O requests from the VMS Bridge Driver by returning every request with successful status.

- The Down-Line Load package provides system maintenance requirements, including down-line loading a front end, taking front-end system crash dumps, and reporting status about each front end.

Refer to SPD #25.51.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $9900
Contact: Consult your local DIGITAL sales office (see Introduction).

FILETAB–D

Operating System: VMS
Keywords: • Application development • Programming tools

Distribution medium: 9-track 800/1600 bpi magnetic tape.

This high-productivity program development tool, developed by Ace Microsystems, England, allows the user to develop applications in one-tenth the time needed to write a traditional COBOL program. FILETAB–D enables the user to write complete systems, enhance existing one, produce new reports, maintain and correct files, and produce test data.

A version of this product is available for the PDP–11 computer.

Price: $850 – $7500
Contact: Karen McCann
(617) 443–5106
EEC SYSTEMS INC.
327/E Boston Post Road
Sudbury, MA 01776

FMS (Forms Management System)

Operating System: MicroVMS, VMS
Keywords: • Application development • Forms management
• Information management
• VAX Information Architecture

Distribution media: 9-track 1600 bpi magnetic tape, RL02, RX01, RX50, TK50, TU58 DECtape II cartridge.

VAX FMS helps a user develop application programs that use video forms. VAX FMS manages the forms for application programs that use DIGITAL's VT100- and VT200-compatible and 3270-compatible terminals.

FMS allows the application program to access and manipulate data in the form at both the field and full-form levels. With RMS user action routines, the application can perform extensive field validation. User action routines can be written by the application developer in any VMS-supported programming language.

VAX FMS form data structures are used by the Form Driver during run time to display forms and to access and validate data entered by the terminal operator. Forms can be created and modified interactively with the interactive editing facility (FMS/EDIT). Forms can also be defined as a source form description with the Form Language and then converted to a form data structure, using the Form Language Translator (FMS/TRANSLATE).

Forms are stored in form library files on disk and are retrieved by application programs at execution time. That arrangement maintains independence between form data structures and application programs. Forms can be modified without recompilation or relinking of the application program. Forms can also be converted into an object module and linked with application programs to create memory-resident forms, or forms can be dynamically loaded into memory by the application program.

Refer to SPD #26.10.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $325 – $3950
Contact: Consult your local DIGITAL sales office (see Introduction).

FORMAT (Forms Management Transaction System), Version 5.1

Operating System: Independent, VMS
Keywords: • Data entry • Forms management • Menu handlers • Programming tools

Forms are easy to design and implement, using the forms designer or command processing language in this full-screen forms management system. Once an application is compiled and linked, form modifications do not require additional relinking time. The forms library stores multiple forms for easy access, and FORMAT maintains a common user interface between FORTRAN and other language applications.

When the user enters data into fields, the characters are verified against each field's valid character set. FORMAT processes each field on a field-by-field basis. Field user action routines can verify each field entered before continuing to subsequent fields. When the form is completed, FORMAT's library modules can extract the data entered for each field as characters or as floating-point or integer values. With FORMAT's powerful library, cross-field operations are easily handled.

FORMAT supports fill-in-the-blanks data entry and inquiry forms. Menu and multiple-choice forms with highlighted cursor positioning are supported.

FORMAT features scrolling and windowing, data entry using either insert or overstrike mode, and multiline field help along with full-screen help. Standard forms management features of reverse video, bold, blink, and underline are included. Field editing and display

options include password protection (suppression of entered data), display only, and edit with display. Field completion is selectable to a special key, completion of the entire field, or both. The field-processing parameters are easily changed, using the powerful library utilities.

FORMAT was designed and implemented using FORTRAN–77 and is available for various hardware and terminal types. Source code is available, along with sample terminal interfaces.

A version of this product is available for the PDP–11 computer.

Price: $150
Contact: Francisco Salazar
—
LA MESA RESEARCH AND DEVELOPMENT
P.O. Box 31
Louisville, CO 80027

Forms-2

Operating System: VMS
Keywords: • Forms management • Programming tools
• Source code control

This powerful visual programming tool speeds the creation of programs involving interactive screen handling. Forms-2 allows the programmer to "paint" the form on the screen, just as the form is to appear to the user at run time. Forms-2 then generates COBOL source code to define the screen.

A version of this product is available for the PDP–11 computer.

Price: $200
Contact: Andy Pope or Stacy Beard, Technical/Customer Support
(415) 856–4161
MICRO FOCUS INC.
1860 Embarcadero Road, #235
Palo Alto, CA 94303

Forms Maintenance Screen for FMS V2

Operating System: VMS
Keywords: • Forms management • Programming tools

Distribution medium: magnetic tape.

This program is written in VAX–11 FORTRAN and calls FMS V2 modules and the VMS CLI interface routines. When applied against the DIGITAL-supplied FMSDCL.CLD, an SLP file named FMSDCL.DIF will produce a CLD file used to define the command FMS/MAINTENANCE, which invokes the program. The form library, FORMMAINT.FLB, is also included.

CHD is a command procedure that may be used to change default directories. It also displays the current directory and can display subdirectories. DECUS number VAX–61.

Note: A copy of the CHD.COM file is included with the FORMMAINT program (DECUS number VAX–61). Because it is a relatively small file (three blocks), it is available independently only as a hard-copy listing.

Price: $5 – $225
Contact: DECUS (see Introduction)

FORTRAN–32000 Cross-Compiler for NS32000

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Compilers • Cross-compilers • Microprocessor development • Source code control

This compiler, developed by Green Hills, is a fully optimizing ANSI FORTRAN–77 compiler for the National Semiconductor 32000 series microprocessors and may be configured as a resident or a cross-compiler. The compiler performs standard microprocessor compiler optimizations and global optimizations normally found in mainframe compilers.

The FORTRAN Cross-Compiler features compatibility with ANSI '66 and '77 standards, 1-pass design for maximum throughput, generated code that runs up to four times faster than portable UNIX* F77 code, 30% less code generation than with the portable UNIX* F77 compiler, extensive loop optimizations, common subexpression elimination for efficient array operations, advanced compiler techniques to reduce space, and complete IEEE and DIGITAL floating-point support.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

FORTRAN 68000 Cross-Compiler for Motorola 68000

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Compilers • Cross-compilers • Microprocessor development • Source code control

This compiler, developed by Green Hills, generates code for the M68000 microprocessor family and performs global optimizations and standard microprocessor compiler optimizations as well. This compiler may be configured as a resident or a cross-compiler. The output of the compiler is Motorola 68000–compatible assembly language source code, which is passed to the OASYS 68000 cross-assembler development system.

This product features complete compatibility with ANSI '66 and '77 standards, 1-pass design for maximum throughput, generated code that runs four times faster than portable UNIX* F77 code, 30% less code generated than with the portable UNIX* F77 compiler, extensive loop optimizations, common subexpression elimination for efficient array operations, advanced compiler techniques to reduce space, complete IEEE and DIGITAL floating-point support, and a proven UNIX* FORTRAN run-time system. This compiler has also passed government-sponsored validation tests.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

FORTRAN Auditor

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Diagnostics
Distribution medium: magnetic tape.

This program automatically audits FORTRAN programs for compliance with user programming standards, poor programming practices, nonportable code, and deviations from the American National Standards Institute (ANSI) definition of the FORTRAN language. Two versions of the Auditor exist: one audits programs for deviations, using the 1966 ANSI Standard definition of FORTRAN; the other uses the 1977 Standard. This tool, which also generates automatic program documentation, is a powerful error detector that typically detects many errors that escape commercial compilers.

No modification of any compiler or application program is required. Rather, FORTRAN source programs are accepted and used as input, and various reports are output. Another feature of the Auditor allows FORTRAN programs intended to run on different target machines to be checked on the host machine where the Auditor is running.

This product possesses a strong management orientation and serves as an excellent quality assurance tool, as it presents simple summaries at the end of its clear and detailed output. The Auditor is a member of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Documenter A

Operating System: ULTRIX–32, VMS
Keywords: • Documentation • Source code control
Distribution medium: magnetic tape.

The Documenter A aids and expedites the methodical and uniform documentation of source program units. This compiler-independent tool provides two basic facilities. The first is a mechanism for generating source program documentation units in the format of a template predefined by the user. Source programs are coded in a straightforward, succinct form and are presented to Documenter A for automatic expansion into a complete documentation unit as detailed in the predefined template. The second facility permits the relocation of source statements from their coded location to any other location within the source text.

This tool serves as an excellent quality assurance instrument that allows management to set, facilitate, and enforce source program documentation standards. This product, also available for a number of other programming languages, is a member of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Interface Documenter

Operating System: ULTRIX–32, VMS
Keywords: • Programming tools • Source code control
Distribution medium: magnetic tape.

This software product accepts as input a collection of object modules and automatically generates clear information indicating interfaces between the object modules. For each module, this product produces an annotated list of the modules it references and a list of the modules that reference it. External data items are also documented.

This easy-to-use product accepts as inputs the same object modules that are normally presented to your linker (binder). Thus, in order to generate the interface documentation, you submit your inputs to the Interface Documenter instead of to the linker (binder).

This product, also available for a number of other programming languages, is a member of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Optimization Instrumenters

Operating System: ULTRIX–32, VMS
Keywords: • Programming tools • Source code control
Distribution medium: magnetic tape.

These two tools automatically generate module and statement-level execution-time profiles (reports) of programs. The profiles quantify optimization efforts in detail, showing absolute and relative execution times for subsystems, modules, and statements, as well as frequency counts and optimization indices.

Instrumenter I operates at the routine level; Instrumenter II, at the statement level. No modification of any compiler or application program is required. The tools accept as input source programs and test data and output clear profiles. The instrumenters permit top-down optimization in a natural manner.

These tools possess a strong management orientation and can have much impact in properly focusing optimization efforts. The tools serve as an excellent quality assurance facility that allows management to set, facilitate, and enforce optimization standards.

These products, also available for a number of other programming languages, are members of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Productivity Library

Operating System: ULTRIX–32, VMS
Keywords: • Application development • Diagnostics • Language enhancers • Programming tools

Distribution medium: magnetic tape.

This applications generator permits the effective use of prefabricated sections of code. Softool has identified a set of high-level data structures that satisfy the need of a large range of application programs. The user writes programs in terms of those high-level data structures and typically obtains well over 50% of the code required for an application automatically from the library.

Two versions of the library are available: one incorporates extensive diagnostics; the other is streamlined for efficient operation. This product includes an interactive interface for data definitions, a dynamic memory-management facility, and such powerful diagnostic features as range checking and dynamic flow analysis.

The Productivity Library is a member of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Recommended Preprocessor

Operating System: ULTRIX–32, VMS
Keywords: • Pre- and postprocessors

Distribution medium: magnetic tape.

The Recommended Preprocessor, built with the aid of the Structurizer tool, is the result of extensive programming experience. The preprocessor includes error-preventing features.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Structurizer

Operating System: ULTRIX–32, VMS
Keywords: • Language enhancers • Pre- and postprocessors • Programming tools

Distribution medium: magnetic tape.

The Structurizer allows a user to generate custom-made preprocessors that augment FORTRAN with user-defined control structures. This tool, a key to the implementation of an effective structured language facility, is also available for a number of other programming languages. The Structurizer is a member of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Testing Instrumenters

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools • Quality control • Source code control

Distribution medium: magnetic tape.

These two tools automatically generate routine- and statement-level execution-time profiles (reports) of programs. The profiles quantify test coverage and test effectiveness in detail: Instrumenter I operates at the routine level; Instrumenter II, at the statement level. No modification of any compiler or application program is required. The tools accept as input source programs and test data and output clear profiles. The Instrumenters permit top-down testing in a natural manner.

These products possess a strong management orientation and can have much impact on minimizing the cost of testing. They serve as an excellent quality assurance facility that allows management to set, facilitate, and enforce testing standards. These products, also available for a number of other programming languages, are members of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

FORTRAN Tracing Instrumenters

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools

Distribution medium: magnetic tape.

These two tools automatically document the path of routine and statement flow of control. Instrumenter I operates at the routine level; Instrumenter II, at the statement level. These products offer the software professional a flexible, consistent, and easy-to-use tracing facility. No modification of any compiler or application program is required. The tools accept as input source programs and test data and output clear trace documentation (profiles) formatted and indented to facilitate understanding. The Instrumenters permit top-down tracing in a natural manner.

These products, also available for a number of other programming languages, are members of SOFTOOL,® an integrated set of tools for software management, development, and maintenance.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

GPIB Software

Operating System: UNIX* (Berkeley), VMS
Keywords: • Communications • Networking

The GPIB software supports our IEEE–488 interfaces to the UNIBUS and Q–BUS. The software, easily installed as part of the operating system, provides the complete set of GPIB operations, including talker, listener, active controller, and system controller. Multiboard software handlers are also available. An interactive control program (IBIC) allows the user to perform any function from a terminal independent of an application program. IBIC is a powerful software development and troubleshooting tool.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $500
Contact: Crit Taylor
(800) 531–5066
NATIONAL INSTRUMENTS
12109 Technology Boulevard
Austin, TX 78727

GPUC (General-Purpose User Command Package)

Operating System: VMS
Keywords: • CAD/CAM • Graphics

GPUC is an easy-to-learn menu-driven set of Intergraph-based general-purpose commands that address engineering and architecture applications. Those macro instructions reduce the required key-ins for repetitive multistep commands. GPUC increases productivity by adding efficient, flexible alternatives to current IGDS methods.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: Debra P. Bressler
(713) 266–0000
EGT, INC.
11011 Richmond, Suite 700
Houston, TX 77042

HABITAT® Application Development and Support Environment

Operating System: VMS
Keywords: • Application development • Data base management • Graphics • Process control

Distribution medium: 9-track magnetic tape.

This interactive, data base–driven application development and support environment is used to create large, complex scientific and engineering applications. Totally integrated with VAX/VMS, the HABITAT environment complements and extends VMS for time-critical and supervisory real-time applications. The HABITAT subsystems are Phoenix, a real-time data base manager; Easel, an interactive color graphics editor/compiler; and Rapport, a user/machine communications interpreter. HABITAT also provides utilities for software development and system management.

Phoenix lets users interactively create and modify data structures and define physical storage attributes of data bases. Relational, hierarchical, linked-list, and other data structures are supported. Easel lets users create and modify color graphics displays whose static and dynamic display entities are logically linked to data bases. Rapport manages the interaction between users and the HABITAT environment.

HABITAT provides full use of native-mode, virtual-memory, 32-bit computer hardware; real-time extensions to VMS data-handling capabilities; integrated data base management and color graphics; facilities for synchronizing and protecting concurrently executing real-time processes; facilities for improving programmer productivity and software reliability; and concurrent operation and development of real-time applications.

Price: $50,000 – $100,000
Contact: Larry Tuttle, Habitat Marketing Manager
(206) 885–5077
ESCA CORP.
13010 Northup Way
Bellevue, WA 98005

IIS/DESTINY™

Operating System: VMS
Keywords: • Application development • Data base management • Information management • Query facilities

Distribution media: magnetic tape, RL02.

This fourth-generation application development and information processing system contains complete facilities for developing, maintaining, and executing computer-oriented solutions to commercial business problems and manages all the data associated with such solutions. Its totally integrated facilities include, but are not limited to, a user-friendly yet sophisticated user/machine interface, a high-level development methodology, fully integrated systemDICTIONARY,© powerful systemQUERY,© and a unique data base manager that supports relational, hierarchical, and network organizational models.

Professional programmers can achieve significant productivity improvements using the system's revolutionary development methodology; inexperienced end users can satisfy many of their own needs, using the systemQUERY and reporting facility. The product is suitable for a broad range of businesses and industries, excluding heavy scientific or engineering applications requiring intensive mathematical activity. Banks, retail establishments, and businesses will find the system's fully integrated facilities powerful yet easy to use and capable of providing significant cost savings in developing and maintaining those applications vital to their business activities. The system is written in BLISS.

Price: $39,500 – $49,500
Contact: P. E. Borkovitz
(212) 962–0662
INTELLIGENT INFORMATION SYSTEMS, INC.
90 West Street, Suite 817
New York, NY 10006

INDEX: FORTRAN Cross-Referencer and Flowchart Generator

Operating System: VMS
Keywords: • Debugging • Programming tools

This FORTRAN source cross-referencing and flowcharting utility allows the user to look at individual source files to determine what variables are used on what lines and how those variables are used. The user can display only variables or COMMON blocks with characteristics such as global/local, assigned value/not assigned value, used/unused, and imported/exported, in any combination. An option shows the variable storage information and usage in FUNCTION/SUBROUTINE calls in both the basic and superindex. The user can generate a flowchart of the source file being cross-referenced.

The user can also save the selected variable/COMMON block names and entry-point information from multiple files and output the accumulated data as a superindex or as an entry-point cross-reference showing who calls whom and is called by whom.

Note: This program is a rewrite of DECUS number 11–229 but does not replace it. DECUS number VAX–99.

Price: $5 – $225
Contact: DECUS (see Introduction)

inSET (Interaction Handler, Software Engineering Toolkit)

Operating System: MicroVMS, VMS
Keywords: • Application development • Forms management • Interpreters • Language processors

Designed to handle the interaction between users and their application programs, this tool supports many of the latest techniques in a machine-independent manner, thus providing program writers with easy access to the advanced features of modern workstations while maintaining portability. The interaction mechanisms supported include keyboard entry, function buttons, graphics, pop-up menus, tablet, forms control, and a BASIC interpreter.

The toolkit is supplied with many aids to help develop and maintain application packages. Based on a simple definition of the interaction required for a program, the user model is generated for processing by inSET at run time. This same definition can be processed by another utility to generate skeleton source code for an application. That code will compile and run, providing a rapid development path for prototype work.

The package includes onSET, a module that supports such machine-dependent features as window management, file handling, and input/output. These routines are fully documented and available for use by the application programmer.

Price: $2000 – $10,000
Contact: Malcolm G. Bird
(0763) 61222
PA MANAGEMENT CONSULTANTS
CAE Cambridge Laboratory Melbourn
Royston, Herts SG8 6DP
England

Interactive Simulators for Microprocessors

Operating System: ULTRIX–32, VMS
Keywords: • Language processors • Microprocessor development • Programming tools • Simulation

Simulators are available for a wide range of microprocessors, including the 8051, 8080/8085, 8086/88/186/188, 8048, 68000, 6809, 6800/01/02/03/04, Z80, Z8002, 1802/1804, and F8/3870. The programs are written in ANSI standard FORTRAN IV and perform interpretive execution of the microprocessor object module in an interactive or a batch mode. The programs can simulate the RAM/ROM environment, I/O operations, and interrupts, as well as the more conventional operand and instruction breakpoints, memory dumps, patching, register setting, and program tracing. Timing information is displayed as cumulative cycle counts, allowing routine execution times to be determined. Run-time error messages are generated for such conditions as illegal op codes and attempts to write into protected memory.

The programs simulate the complete microprocessor addressing space by using a disk page swapping technique that reduces page swapping. Extensive I/O simulation is provided. Input data may be obtained from the user through a program-generated prompt, from a predefined data table, or from an input data file. Output data may be written to the user's output device, an output data latch that may be examined with a simulator command or a data file. The user may specify the source of the input data and the destination of the output data for each port. I/O through memory locations may be simulated in the same manner. The simulators allow the user to use the symbolic names (labels) from the assembler and thus provide for symbolic debugging, avoiding the need to deal with absolute addresses.

A version of this product is available for the PDP–11 computer.

Price: $1250 – $1500
Contact: Peggy Hall
(408) 733–2919
MICROTEC RESEARCH, INC.
505 W. Olive, Suite 325, P.O. Box 60337
Sunnyvale, CA 94088

InterTools:™ Cross-Debuggers and Cross-Compiler Systems

Operating System: MicroVMS, ULTRIX–32m, VMS
Keywords: • Cross-compilers • Debugging • Microprocessor development • Software utilities

This integrated set of source-level cross-debuggers, C and Pascal compilers, manufacturer-compatible assemblers, and utilities is for use in programming embedded system applications. The compilers produce code for the 68000/68010, 8086/80186, Z8Q, and 6809. Some real-time features of the compiler include ROMable code, automatic RAM initialization, complete control of memory assignment for code and data, and independent relocatability of code and data units.

The cross-debugger preserves a source language view of the execution environment, translating its commands into operations for an emulator, ROM monitor, or OS kernel. When needed, however, the transparent mode of the debugger allows direct access to the emulator or kernel.

Price: $3000 – $9000
Contact: Gary Ziffer
(617) 661–0072
INTERMETRICS, INC.
733 Concord Avenue
Cambridge, MA 02138

InterUpt (ISM Universal Programming Tool)

Operating System: VAX DSM, VMS
Keywords: • Programming tools • Project management • Security • Source code control

This programming tool enables a MUMPS programmer to develop MUMPS systems efficiently. Using InterUpt's various functions, a programmer writes, edits, and saves programs; automatically creates routine cross-references, global file cross-references, routine verification, and file link cross-references; and performs routine compare, restore, move, dump, and print operations.

InterUpt also includes a security system, making the Routine Development Utility password controlled. In that way, personnel may be limited to using one or more of the functions in InterUpt. In addition, user levels may be set up so that IDs may have access to routines that are developed at the same or lower level but not to routines developed at higher levels.

Each routine developed using InterUpt is date stamped with the horolog date and the programmer's ID. In that way, routines are easily identified as to the date of last update and the programmer responsible for the update.

Routines may also be given a package name and a program subset within the package. Thus, InterUpt can perform various tasks on a package or on a program subset of the package, given only the package name and/or functional subset's name.

A version of this product is available for the PDP–11 computer.

Price: $2500

Contact: Robert E. Joerger, Vice President
(201) 256–7633
INTERACTIVE SYSTEMS AND MANAGEMENT CORP.
1500 Cardinal Drive
Little Falls, NJ 07424

KM.SYS (Device Driver for Konelar Extended Memory)

Keywords: • Device drivers/handlers • File management • File transfer

KM.SYS, a pseudo–device driver for RT–11, uses a portion of Konelar extended memory as a file-structured device. File transfers are immediate, have zero latency delay, and occur at memory-to-memory speed. Konelar memory has built-in memory management that supports up to 64 megabytes on any PDP–11. Konelar memory management does not conflict with, nor is it equivalent to, DIGITAL memory management. KM.SYS does not use, and is not compatible with, the XM version of RT–11. Programs linked with KXMLNK, the Konelar extended memory linker, use extended memory for program segments. Programs using extended memory for code segments may also use part of extended memory for file space with KM.SYS; that is, KM.SYS and KXMLNK are fully compatible.

A version of this product is available for the PDP–11 computer.

Price: $450

Contact: Kenneth T. Pruyn
(617) 275–3939
KONELAR CORP.
P.O. Box 267
Bedford, MA 01730

Language-Sensitive Editor

Operating System: MicroVMS, VMS

Keywords: • Application development • Programming tools • Text management

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

The VAX Language-Sensitive Editor is a multilanguage, multiwindow, screen-oriented editor for software development and maintenance. Working together with other VAX languages (including VAX Ada,® BASIC, BLISS–32, C, COBOL, FORTRAN, Pascal, and PL/I),

the editor provides an environment that helps users develop programs more quickly, with fewer errors. The editor provides a "library" of source code templates for the supported VAX languages, along with extensive on-line help.

The editor streamlines software development by allowing users to complete multiple programming tasks within the editor environment. Users can edit, compile, review, and correct compilation errors within a single editing session. Features are provided for tailoring and extending the editing environment to address user preferences and coding conventions. The editor can be invoked from both the VAX Debugger and the VAX Performance and Coverage Analyzer to correct source code as problems are detected.

Refer to SPD 26.59.xx when requesting further information on this product from your local DIGITAL sales office.

Ada® is a registered trademark of the U.S. government (Ada Joint Program Office).

Price: $5000 – $7500
Contact: Consult your local DIGITAL sales office (see Introduction).

Lawrence Berkeley Labs Software Tools

Operating System: VMS
Keywords: • Interpreters • Pre- and postprocessors • Programming tools • Text management

This is an extended version of the software tools described in the Kernighan and Plauger book *Software Tools*. The tools include many utility programs, such as editors, text manipulation routines, and so on, as well as a flexible, UNIX*-style command interpreter that acts as a command shell under VMS. This version of the tools package is used at Lawrence Berkeley Labs. Most of the code is written in either FORTRAN or RATFOR (a more structured version of FORTRAN that may be preprocessed into ANSI 66 FORTRAN). A copy of the RATFOR preprocessor is included in the package.

Documentation is on magnetic media. DECUS number VAX–14.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $5 – $225
Contact: DECUS (see Introduction)

Library Procedures and Macros, Fermilab

Operating System: VMS
Keywords: • Language enhancers • Software utilities

Distribution medium: magnetic tape.

These procedures, additions to the VAX Run-Time Library at Fermilab, expand the capabilities of the VAX high-level languages (use of absolute queues, run-time procedure argument count, run-time argument default testing, and so on), particularly of FORTRAN (procedures to provide indirect memory access through pointers in FORTRAN INTEGER*4 variables). Included is a condition handler used in detached processes to log signals to the system operators. Macros for defining Radix–50 constants are included as part of a general macro library used at Fermilab. DECUS number VAX–50.

Price: $5 – $225
Contact: DECUS (see Introduction)

Library Tape 1

Operating System: VMS
Keywords: • Documentation • Programming tools • Software utilities

Distribution medium: magnetic tape.

The VAX Library Tape 1 contains programs from VAX–1 through VAX–21. SPICE2 (VAX–6) is included on this tape. U.S. government export regulations prohibit distribution of this program outside the United States without export licenses.

Documentation is on magnetic media. A manual includes the documentation not available on the magnetic media. DECUS number VAX–LIB–1.

Price: $5 – $225
Contact: DECUS (see Introduction)

Library Tape 2

Operating System: VMS
Keywords: • Documentation • Programming tools • Software utilities

Distribution medium: magnetic tape.

The VAX Library Tape 2 contains programs from VAX–22 through VAX–39, VAX–41 through VAX–45, and VAX–47 through VAX–74.

Documentation is on magnetic media. DECUS number VAX–LIB–2.

Price: $5 – $225
Contact: DECUS (see Introduction)

M6800/01/05/09 Cross-Software Packages

Operating System: VMS
Keywords: • Compilers • Cross-compilers • Microprocessor development • Programming tools

Wintek's M6800–family Cross-Software Packages allow the rapid development of microcomputer software for the Motorola 6800, 6801, 6805, and 6809. The packages include both macroassemblers and high-level language compilers:

- 6800/6801, 6805, and 6809 cross-assemblers
- 6800 and 6809 PL/W cross-compilers
- Cross-linker
- 6800 and 6801 simulators
- 6800 floating-point, scientific subroutine package

Since these programs are designed to run on minicomputers and mainframes, the user has all the advantages of larger machines during development, such as powerful editing facilities, large file systems, utility programs, quick response, and multiuser access.

The cross-assemblers are normal, 2-pass assemblers that use most of the standard Motorola instruction mnemonics and directives. Both macros and conditional assembly are supported. The assemblers accept free-format input and produce formatted output with line and page numbers, titles, and subtitles. Error messages are in English and point to the character in error. The output listings include both an alphabetized symbol table and a cross-reference map for all symbols. The assemblers can produce either absolute object code in Motorola's S0–S1–S9 format or relocatable object code for use with the cross-linker.

PL/W is a high-level language patterned after PL/I and is very close to Intel's microcomputer language PL/M. Wintek's PL/W is a block-structured language that supports the control features required for structured programming, such as procedures, functions, IF–THEN–ELSE, DO CASE, DO WHILE, iterative DO, and more. Variable names may contain up to 31 characters. The compilers produce formatted source listings and relocatable object code.

The cross-linker links and relocates separately compiled and assembled relocatable routines, producing a single program in Motorola's S0-S1-S9 format.

The 6800 and 6801 simulators provide a way to test small programs without using a 6800 system.

The floating-point and scientific subroutine package is written in 6800 assembly language and can be linked to modules produced by the 6800 cross-assembler and 6800 PL/W. Operations performed by the packaged routines include addition, subtraction, multiplication, division, logarithms, exponentiation, square root, SIN, COS, TAN, ARCSIN, ARCCOS, ARCTAN, SINH, COSH, and TANH.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $3400
Contact: Mark Corzine or Steve Belter
(317) 742–8428
WINTEK CORP.
1801 South Street
Lafayette, IN 479042993

MAINDEBUG™ — MAINSAIL™ Source-Level Debugger

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Debugging • Source code control

This portable debugger for programs written in MAINSAIL provides identical functionality across all computing systems. MAINDEBUG operates on MAINSAIL source text rather than on the underlying processor's instruction set, eliminating the need to know about that instruction set.

MAINDEBUG is fully interactive and supports a line-oriented command interface. When used with MAINEDIT™ (the MAINSAIL text editor), MAINDEBUG provides a display-oriented command interface. With either interface, a cursor moves on the source text to show the debugger what needs to be done. Any mix of debuggable and nondebuggable modules is supported by MAINDEBUG. The debugger can be invoked prior to execution of a debuggable module to catch prespecified events, or when an error occurs in any debuggable module. MAINDEBUG provides the ability to set/remove breakpoints, set/examine the value of variables, single step, and execute procedures.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $880 – $7000
Contact: Greg Jirak
(415) 324–8745
XIDAK, INC.
530 Oak Grove Avenue, Suite 101
Menlo Park, CA 94025

MAINPM™ — MAINSAIL™ Performance Monitor

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Debugging • Programming tools
• Source code control

MAINPM is a portable performance monitor that expands the functionality of the fully portable MAINSAIL programming environment through dynamic monitoring of program execution. MAINPM's annotated source listing feature permits rapid pinpointing of performance problems by listing each source statement and the number of times the statement has been executed. To aid automated test procedures,

MAINPM provides an option that displays nonexecuted program statements. Programmers can see at a glance unexecuted — and therefore untested — statements.

MAINPM also allows monitoring of both the "deep" time (which includes time spent in called procedures) and "shallow" time (which excludes time spent in called procedures) spent in each procedure or module. As a result, programmers can quickly obtain an overall understanding of where the program spends its time during execution and identify those sections of code that consume the most time.

Because programmers can concentrate on producing error-free code and perform program debugging before analyzing performance deficiencies, MAINPM encourages good programming practices and eliminates "premature optimization" that often leads to obscure, error-prone code.

MAINPM can quickly pinpoint performance problems; provide a timing and statement count table for both procedures and modules, total program execution time, and source text annotated with statement counts; and list a table of unexecuted procedures and modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $880 – $7000
Contact: Greg Jirak
(415) 324–8745
XIDAK, INC.
530 Oak Grove Avenue, Suite 101
Menlo Park, CA 94025

M/APS (Menu/Authorization Processor System)

Operating System: VMS
Keywords: • Information management • Programming tools • Security

Distribution medium: magnetic tape.

This system allows automatic creation of user-oriented application menus and controls user access to both menus and the specific application programs. M/APS offers the ability to add new menus and modify existing menus through on-line entry and security through the ability to specify which users can gain access to individual applications and programs. The system monitors and warns when any illegal access is attempted and aborted, prevents access to the monitor level, limits display to only those items available to the user, and traces user movement through the menu system.

M/APS denies access or use of sensitive data to unauthorized users, provides relatively easy access for authorized users, and logs usage and detects illegitimate penetration.

A user installation/instruction guide is included.

A version of this product is available for the PDP–11 computer.

Price: $1500

Contact: Neal J. Anderson, Senior Product Specialist
(414) 784–8250
MCHUGH, FREEMAN AND ASSOCIATES, INC.
1135 Legion Drive, P.O. Box 454
Elm Grove, WI 53122

MAT (Maintainability Analysis Tool)

Operating System: VMS

Keywords: • Debugging • Diagnostics • Programming tools

This static analyzer of FORTRAN modules reads, parses, and analyzes each FORTRAN source module (including debug statements and INCLUDE files) in a set of intercommunicating modules. MAT diagnoses source-level discrepancies and errors in each module and set of modules. MAT detects the module interface problems that modularization of a program causes and analyzes FORTRAN–77, VAX FORTRAN, and FORTRAN–66 dialects. MAT documents each module's interface — common blocks present, INCLUDE files used, and so on — and provides a call tree of the module set. The call tree specifies the modules each module references and the modules that reference it. MAT can produce a full name cross-reference table, giving a full description of each name, the modules in which each name appears, and what is done to each name in each module. MAT detects multiply defined names, circular calling, and poor programming practices and also provides measurements of the difficulty of maintaining each module.

A discount for multiple copies is available.

Price: $5000

Contact: Gerald M. Berns
(703) 979–5900
SCIENCE APPLICATIONS INTERNATIONAL CORP.
2361 Jefferson Davis Highway, Suite 300
Arlington, VA 22202

MDBS III

Operating System: ULTRIX–32

Keywords: • Data base management • Data dictionary • Query facilities • Report writer

This data base management system supports simple, direct representation of complex data relationships and permits easy specification of relational, hierarchical, and CODASYL networks. MDBS III can be interfaced to numerous host languages, including BASIC, FORTRAN, COBOL, Pascal, PL/1, C, and KnowledgeMan. Multiuser and local

area network versions are available for certain environments. Threefold security provisions include password checking, read- and write-access controls, and data encryption. Data compression and range checking are supported.

The data description language (DDL) allows the developer to specify the structure and contents of the data base. The data management system (DMS) executes the data manipulation language (DML) specified by the application developer. A standard buffer-flushing facility substantially reduces the chance of data loss in the event of abnormal interruptions. An extensive automatic recovery and transaction-logging (RTL) feature, which prevents data loss due to media/power failures and other abnormal system interruptions, is also available. Rollback and selective recovery are supported through page-image posting and transaction logging.

An interactive version of the DML (IDML) enables nonprogrammers to interactively specify DML commands to create, modify, and access an MDBS III data base. A nonprocedural English-like query and retrieval system (QRS) permits ad hoc report generation from an MDBS III data base. The report definition language (RDL) is optionally available to permit a comprehensive specification of report formats. The design modification utility (DMU) allows users to modify and expand a data base.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: MDBS III Marketing Representative
(312) 981–9200
MICRO DATA BASE SYSTEMS, INC.
85 W. Algonquin Road, Suite 400
Arlington Heights, IL 60005

MDE (Microcomputer Development Environment)

Operating System: VMS
Keywords:
- Debugging
- Microprocessor development
- Simulation
- Source code control

Distribution media: RX01, TU58 DECtape II cartridge.

VAX MDE is an in-circuit emulation development system for Micro/T–11 16-bit microprocessors. VAX MDE offers features for observing, controlling, and simulating the hardware interface between the processor and external circuitry, without impacting the speed, performance, or operating environment of the Micro/T–11. VAX MDE includes a MACRO–11 source language debugger and contains a hardware interface that observes and controls the Micro/T–11 signals in real time.

Refer to SPD #25.87.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

Menu

Operating System: VMS
Keywords: • Menu handlers

Menu allows a user to execute a program image, a DCL command procedure, a batch job, or a DCL command by selecting a key from the menu displayed on the terminal. When the selected action ends, the user returns to the menu for another selection. The menu is based on a data file in the user's default directory. As the default is changed, different menus are presented to the user. Based on options, the menu can be made to prohibit exit into DCL. DECUS number VAX–83.

Price: $5 – $225
Contact: DECUS (see Introduction)

THE MENU SYSTEM

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Data entry • Menu handlers • Office systems • Programming tools

The Menu System is a user-friendly system that allows designers to build menus in front of XENIX, or any program running under XENIX, without learning a programming language or data file format. The end user is presented with a menu offering numbered choices. One keystroke will execute the most complex program. The Menu System is terminal-independent and provides three levels of help and a tutorial mode that can be used to learn XENIX on any program.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $250 – $1000
Contact: David Schneider
(201) 447–3901
SOFTEST
555 Goffle Road
Ridgewood, NJ 07450

MENUPRO

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Menu handlers

Used in a broad range of business applications, MENUPRO facilitates the design and implementation of multilevel menus with a simple interactive process, allowing real-time modification to menus with no compilation. The system features security for terminal users, listings of operators and programs, and multiuser capabilities.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $250 – $2500

Contact: Ruth Deiches
(415) 527–1157
BYTEL CORP.
1029D Solano Avenue
Berkeley, CA 94706

/menus

Operating System: ULTRIX–32, UNIX* (Berkeley)

Keywords: • Data entry • File management • Menu handlers

Memory required: 128KB minimum. Distribution media: 5¼″ diskette, 9-track magnetic tape, cartridge.

This UNIX*-based development tool provides user-friendly interfaces to applications or system management and includes features such as "pop-up" windows, dynamic and free-form menus, on-line documentation, foreign language support allowing definition of up to 256 characters, inquiry by examples, and C-language interface. This product helps make UNIX* acceptable to the unsophisticated user and reduces application development and maintenance costs. All tasks are menu driven and take advantage of UNIX* capabilities, utilities, and peripherals. Menu-graphics capability may be built in or custom tailored. Screen design is terminal independent.

Subsystems of /menu are /forms and /PLI. Data stored in any UNIX* utility can be entered, deleted, updated, and selected with /forms. Files maintained with /forms can be input to UNIX* command utilities, data base management systems, and local application programs. Designed as an implementation tool, /PLI is an easy-to-use program language interface.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $295 – $1295

Contact: Dick Vento, Vice President, Sales and Marketing
(415) 499–8001
SCHMIDT ASSOCIATES
7 Mt. Lassen Drive, #A–250
San Rafael, CA 94903

Microbench 6800 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These programs support application development for the Motorola 6800 through 6803 microprocessors. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench 6800 assembler language closely parallels that defined by Motorola.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object files libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 6800 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 6800 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1900 – $2900

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench 68000 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These programs support application development for the Motorola 68000 microprocessor. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench 68000 assembler language closely parallels that defined by Motorola.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object file libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 68000 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 68000 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2200 – $3200

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench 6805 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These programs support application development for the Motorola 6805 microprocessors. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench 6805 assembler language closely parallels that defined by Motorola.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object files libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 6805 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 6805 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1900 – $2900
Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench 6809 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These programs support application development for the Motorola 6809 microprocessor. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench 6809 assembler language closely parallels that defined by Motorola.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object files libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 6809 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 6809 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1900 – $2900

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench 8021/8035/8048/8748 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

This series of programs supports application development for the Intel 8048 series microprocessors. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench 8035/8048/8748 assembler language closely parallels that defined by Motorola.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object files libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 8035/8048/8748 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 8035/8048/8748 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1900 – $2900
Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench 8051 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These programs support application development for the Intel 8051/8351/8751 series microprocessors. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench 8051 assembler language closely parallels that defined by Intel.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object files libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 8051 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 8051 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1900 – $2900

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench 8080/8085 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

This series of programs supports application development for the Intel 8080 and 8085 microprocessors. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench 8080/8085 assembler language closely parallels that defined by Intel.

The linking loader.links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object files libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 8080/8085 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 8080/8085 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1900 – $2900

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench 8086/8087/8088 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

This series of programs supports application development for the Intel 8086, 8087, and 8088 microprocessors. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The assembler language defined is a superset of our 8080/8085 cross-assembler, with op code and operand formats similar to those defined by Intel for the 8086/8087/8088.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object files libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench 8086/8088 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench 8086/8088 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2200 – $3200

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94598

Microbench FORTRAN–77 Cross-Compiler for the Intel 8086/8088

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Compilers • Programming tools • Translators

Distribution media: 9-track 800/1600 bpi magnetic tape, RK05, RX01.

This package consists of a FORTRAN–77 compiler and 8086/8088 run-time routines to support application development for the Intel 8086 and 8088 microprocessors. The compiler operates on PDP–11, LSI–11, and VAX computers to provide an economical program development facility. The run-time library provided with the compiler operates with Intel 8086/8088 microprocessors to support the execution of FORTRAN applications. The run-time library is provided in two forms: one uses the Intel 8087, and the other simulates the 8087 through 8086 software support.

The FORTRAN language recognized by the compiler conforms to ANSI Standard (X3.9–1978) at the official subset level. FORTRAN–77 has been approved by the Department of Defense as a programming language for DOD systems. Language extensions have been added to support ROM/RAM memory environments and the full addressing capabilities of the 8086/8088.

The FORTRAN compiler translates FORTRAN programs into 8086/8088 assembly language statements. Those statements are assembled, linked with subprograms and run-time support routines, and down-loaded to an 8086/8088 for execution. For dedicated applications, programs may be stored in PROM, with RAM used for variable data storage. Assembly, linkage, and down-loading facilities are provided by the Microbench 8086/8088 cross-assembly system, also available from Virtual Systems.

Microbench FORTRAN–77 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench FORTRAN–77 software may be purchased by special order. Source programs for the run-time library may be purchased by FORTRAN–77 licensees.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench Pascal Cross-Compiler for the Intel 8086/8088

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Compilers • Microprocessor development • Translators

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

This package consists of a Pascal compiler and standard run-time procedures to support application development for the Intel 8086 and 8088 microprocessors. The compiler operates on PDP–11, LSI–11, and VAX computers to provide an economical program development facility. The run-time library provided with the compiler operates with Intel 8086/8088 microprocessors to support the execution of Pascal applications.

The Pascal language recognized by the compiler conforms to the proposed ISO standard for Pascal (March 1980). Language extensions have been added to support separate module compilations. Support for ROM/RAM memory environments and the extended address space of the 8086/8088 is also included.

The Pascal compiler first translates Pascal programs into a very dense intermediate language form. Next, extensive optimization of the intermediate form is performed. The intermediate language is then translated to assembly language statements for the 8086/8088. Those statements are assembled, linked with subprograms and run-time support routines, and down-loaded to an 8086/8088 for execution or passed to the Microbench 8086 simulator.

All run-time support routines are reentrant so that multitasking can be supported. For dedicated applications, programs may be stored in ROM, with RAM used for variable storage. Assembly, linkage, and down-loading facilities are provided by the prerequisite Microbench 8086/8088 cross-assembly system, also provided by Virtual Systems.

Microbench Pascal software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Source programs for the run-time library may be purchased by Pascal licensees.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1750 – $2750

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench Simulators for the Zilog Z80, Intel 8080, and Intel 8086

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Debugging • Microprocessor development • Simulation

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These simulators provide a complete microprocessor development system that includes up to one megabyte of memory and that can simulate virtually any hardware environment, including interrupts. The simulators operate on PDP–11, LSI–11, and VAX computers.

You direct the execution of your program with the simulator from your terminal, controlling the contents of memory and the CPU registers at all times. You use the trace and breakpoint features to follow the exact progress of your program. The Microbench simulators enable you to run and debug your programs long before they reach the target microprocessor system.

Object files in standard Intel hexadecimal format — produced by Microbench cross-assemblers and cross-compilers — may be loaded into simulator memory. Any portion of the program can then be executed with or without breakpoints. The simulators allow you to assemble and load assembly language statements entered at the console. Memory locations and internal registers may be printed for examination or alteration.

Each simulator provides 16 relocation constants, a trace feature, cycle count, and I/O and memory map routines that may be modified to simulate any operating environment. Upon exit, the contents of the registers and relocation constants are saved. In addition, the Intel 8080 and 8086 simulators allow symbolic names to be displayed or deleted.

Microbench simulator software is distributed with a license and includes two sets of reference manuals and a software maintenance/update service. The reference manuals describe the operation of the Microbench simulators and may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1400 – $2400

Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench Z80 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These programs support application development for the Zilog Z80 microprocessor. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench Z80 assembler language closely parallels that defined by Zilog.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object file libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench Z80 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench Z80 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1900 – $2900

Contact: Nicholas P. Mason, Sales Manager
(415) 934–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

Microbench Z8000 Cross-Assembly Package

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Application development • Assemblers • Microprocessor development • Programming tools

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, RX02.

These programs support application development for the Zilog Z8000 microprocessor. The programs operate on PDP–11, LSI–11, and VAX computers to provide an economical program development facility. Both segmented (8001) and unsegmented (8002) versions of the Z8000 are supported.

The software includes a relocating assembler, linking loader, librarian, and down-loader. The assembler supports extensive macro and conditional assembly capabilities, cross-reference listings, floating-point data types, local symbols, and a system macro library. The Microbench Z8000 assembler language closely parallels that defined by Zilog.

The linking loader links separately assembled object modules, resolves external references, and translates relocatable addresses to their absolute values. Linker directives are provided to define start addresses for code (ROM) and data (RAM) segments. Library files produced by the librarian may be used to supply code or data required to resolve external references. Only the modules in the library files that satisfy outstanding external references will be linked.

The librarian provides facilities to create and maintain object file libraries. Object modules can be combined into a library file and subsequently updated or deleted, as required. Facilities are also provided to list the directory of all modules in a library file and the external symbols contained in each.

The down-loader reformats an absolute binary program produced by the linker into any of a variety of formats compatible with popular PROM programmers and emulation systems.

The assembler, linker, and librarian are coded in assembly language for high throughput and memory efficiency.

Microbench Z8000 software is distributed under a perpetual license and includes two sets of reference manuals and a 1-year software maintenance/update service. Additional reference manuals describing the operation of the Microbench Z8000 program development software may be purchased by special order.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2200 – $3200
Contact: Nicholas P. Mason, Sales Manager
(415) 935–4944
VIRTUAL SYSTEMS, INC.
1500 Newell Avenue, Suite 406
Walnut Creek, CA 94596

MicroPower/Pascal–VMS

Operating System: VMS
Keywords: • Compilers • Debugging • Device drivers/handlers • Microprocessor development

Distribution media: 9-track 1600 bpi magnetic tape, RK07, RL02.

This modular executive and software development package for PDP–11–based microcomputer applications includes the software components needed to create, build, and debug/test concurrent real-time application software running stand alone on a target run-time

microcomputer system. MicroPower/Pascal–VMS supports application software development, using a host VAX/VMS development system and a target PDP–11 (Q-bus only) run-time system for the microcomputer application.

The application software is created and linked with the appropriate MicroPower/Pascal–VMS run-time software components on the host development system. When the application software is ready for debugging/testing, it is transported to the target run-time system. The application software can then be executed in the target run-time system. If a serial line is connected between the host development system and the console port of the target run-time system, the execution of the application software in the target can be controlled and tracked from the host with the help of the debugging tools provided in MicroPower/Pascal–VMS. The separation of the host development system from the target run-time system allows the user to use a high-performance host development system and to test the application software in the target run-time environment.

The MicroPower/Pascal–VMS software package includes installation/verification command procedures, host development system software components, and MicroPower/Pascal target run-time system software.

Refer to SPD #26.24.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1150 – $1500
Contact: Consult your local DIGITAL sales office (see Introduction).

MIRA

Operating System: UNIX* (Berkeley), VMS
Keywords: • Compilers • Language processors • Programming tools • Query facilities

Memory required: 100KB. Distribution media: 9-track 1600 bpi magnetic tape, 8″ diskette, ¼″ streaming tape.

This tool helps software designers to transform an ambiguous specification into a reliable software product. MIRA offers a simple but powerful formal, high-order software specification language to specify the software product. Features include automatic control of the formal specification, documentation, and the ability to use the software in modules. Part of the software is generated in a high-level language.

MIRA improves the productivity and quality of software engineering through a sound design technology, formal specification methods, early error detection, automatic software generation techniques, and more. MIRA translates user interfaces into machine-readable interfaces or program internal structures.

At the user's request, the company provides support in the development of the first products made with MIRA. MIRA is written in Pascal.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $50,000

Contact: Joost Cardoen/Jacques Dewulf
32/(91)–21–03–83 or 84
EXPERT SOFTWARE SYSTEMS N.V.
Moutstraat 100
Ghent 9000
Belgium

Motorola 68000/10 Cross- and Resident Assembler

Operating System: UNIX* (Berkeley, System III), VMS

Keywords: • Assemblers • Microprocessor development • Programming tools

This system, developed by Green Hills, gives the professional software developer a powerful tool for generating M68000 programs and consists of a macro assembler, linker, librarian, and cross-reference utility. The system assembles and links Motorola 68000 assembly language instructions to form executable program images for an M68000 environment. The assembly system may be run in cross-mode on a host system to generate executable code for a target M68000 micro or in resident mode for use as the system's standard assembler/linker. The macro assembler is EXORMACS compatible, and the linker's executable load module's output conforms to Motorola's S-record format. The OASYS OBJCON utility can convert to several other load module formats. The assembler is compatible with Whitesmiths, Green Hills, Software, and Pacer systems and with C, Pascal, and FORTRAN compilers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

Motorola 68000/10 Simulator

Operating System: VMS

Keywords: • Cross-compilers • Microprocessor development • Simulation

The Motorola 68000/10 Simulator creates on the host CPU an M68000 run-time environment that permits developers to execute Motorola 68000 binary images (load modules), step through programs instruction by instruction, collect timing information, and verify program accuracy. All M68000/10 instructions are handled.

The simulator features a built-in disassembler, which displays memory locations as mnemonic assembly constructions. The disassembler performs timing analyses in machine cycles, single stepping, break points, powerful display commands, and a full range of hardware (keyboard and I/O) simulation.

Used in conjunction with the OASYS M68000 C cross-compiler and the M68000 cross-assembler, the simulator can significantly increase productivity of companies involved in microprocessor development by making better use of centralized engineering computers and shortening overall debugging time by eliminating time-consuming down-line loads to microprocessor stations. This product is also ideal for educational environments that wish to teach microprocessor architecture but have limited funds for hardware expenditures.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

Motorola 68000/10/20 Cross-Development Tools

Operating System: VMS
Keywords: • Assemblers • Cross-compilers
• Microprocessor development • Programming tools

The compiler, assembler, and linker are derived from Motorola's development system products under license from Motorola and are therefore Motorola-compatible at the source, object, and executable levels. These cross-development tools include the M68000/10/20 Pascal Optimizing Cross-Compiler, the M68000/10/20 Structured Macro Cross-Assembler, the M68000/10/20 Cross-Linker, the M68000/10/20 Cross-Object Library Builder, and the VAX/VMS ↔ EXORmacs™ file transfer utility. Pascal compiler object modules may be combined with assembler object modules, using the linker to support real-time applications. The products are written in native mode for fast execution. Software support is included for one year from purchase; further support is available.

Executable files for VAX/VMS are distributed on 9-track tape in Files–11 format; other formats are available. Executable files for the EXORmacs are available on 8″ diskette or CDC 9448 "Phoenix" cartridge.

Price: $995 – $2995
Contact: Director of Marketing, Cross-Development Products
(415) 962–8080
OCTAL, INC.
1951 Colony Street
Mountain View, CA 94043

NDTRAN2

Operating System: VMS
Keywords: • Interpreters • Simulation • Source code control

NDTRAN2 is a dynamic simulation interpreter capable of carrying out dynamic and stochastic simulations. This interpreter is available in two basic versions: a research version that accepts a source simulation program of up to 4000 statements and a standard version that can execute programs somewhat larger than WORLD3 and that operate on a computer with a 28K FORTRAN batch partition, such as the PDP–11–series computers. The standard version is available in a double-precision version or a single-precision version, depending on the requirements of the computer at the installing college or university. All versions sent to installations with PDP–11–series computers are single precision, requiring the half-word integer option.

The source program for NDTRAN2 is approximately 13,000 statements long, of which about 8000 are COMMENT cards that constitute the basic documentation for the NDTRAN interpreter. Read the COMMENT statements in the main program NDTRAN, which contain parameters that must be set for the installation computer. DECUS number VAX–16.

Price: $5 – $225
Contact: DECUS (see Introduction)

NS16032 Cross-Compiler

Operating System: ULTRIX–32, UNITY, UNIX* (Berkeley)
Keywords: • Compilers • Cross-compilers • Translators

HCR's NS16032 Cross-Compiler allows C programs to be compiled on the VAX for use on the NS16032. The cross-compiler supports long identifiers and floating points and exploits the NS16032 software module hardware facilities. HCR's NS16032 Cross-Compiler includes the compiler, assembler, linkage editor and loader, and complete UNIX* C library routines. Pascal and F77 translators are also available.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $4000 – $6000
Contact: Sales Department
(416) 922–1937
HUMAN COMPUTING RESOURCES CORP.
10 St. Mary Street, Fourth Floor
Toronto, Ontario M4Y 1P9
Canada

OMNI

Operating System: VMS
Keywords: • Data base management • Mathematics • Report writer • Simulation

This modeling language, report writer, and data management system allows a structured, data-driven approach to the design and building of modeling applications. OMNI interfaces with the HS/LP linear programming system.

Used for building large-scale mathematical models, OMNI serves industries such as petroleum, chemicals, wood products, energy, metals, and food processing. OMNI includes modules for processing, storing, and updating input data; a language compiler; and utilities for model management. The report writer features produce reports of model results and assumptions used. The language is highly structured and maintains consistent grammatical rules throughout its calculation, model generation, and report-writing functions.

Price: $11,520 – $19,500
Contact: George Macdonald
(201) 627–1424
HAVERLY SYSTEMS INC.
78 Broadway, P.O. Box 919
Denville, NJ 07834

OPTIKEY — The Command-Key Builder

Operating System: VMS
Keywords: • Programming tools

This system converts frequently used command strings to a single keystroke. OPTIKEY interactively creates, maintains, and loads command strings in your terminal's "soft" (user-defined, programmable) keys and for on-screen labels if your terminal has that feature.

OPTIKEY stores in a single file up to 50 name sets of 32 command strings each. To access a string, call the file and enter the set name. That effectively lets you create macro commands without using system memory.

Application programs can also use OPTIKEY to load soft-key definitions and labels into a terminal by supplying the file and set names. That makes the application program terminal independent and allows faster program development.

Price: $1000
Contact: John McLean
(713) 871–9134
JOHN MCLEAN AND ASSOCIATES
P.O. Box 270507
Houston, TX 77277

Optimizing C 6809 Cross-Compiler

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Compilers • Cross-compilers
• Microprocessor development

This package, developed by Microtel Pacific Research, contains a binary version of the Motorola 6809 C cross-compiler, optimizer, and back-end Motorola-compatible assembler, relocatable linker/loader, and object file down-line loader utility. Two C cross-compilers are available for generating M6809 assembly language code. Both may be used with the 6809 optimizer. One compiler is C6809–1 (PCC-based), and the second is C6809–2, which accepts an older version of the V6 language.

The 6809 optimizer performs code size optimization on the assembly output of the compilers. Techniques include constant folding, removal of redundant operations, common subexpression detection, strength reduction, addressing mode/register substitutions, code hoisting, span-dependent branch optimizations, and subroutine replacement of duplicated code sequences. Data flow analysis techniques are used extensively. Code reductions of 15% to 30% are attainable.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

OVM (Overlay Manager)

Operating System: ULTRIX–32, VMS
Keywords: • Microprocessor development • Programming tools

OVM performs dynamic program overlay management for 68000 programs. Modules are preprocessed into a special relocatable overlay format and stored in a disk file. A small resident overlay manager adjusts to the available memory and loads and deletes variable-sized program segments as needed. Knowledge of the program's dynamic operation is not needed prior to program execution. A least-recently-used algorithm manages space. Function calls between overlays are permitted. Run-time trace may be generated.

OVM processes M68000 modules produced on VAX or M68000; runs programs without regard to memory available during run time; stores any number of relocatable overlays in a single file; loads and relocates overlays on demand; automatically adjusts to available space; codes interoverlay function calls in ASM for efficiency — fast calls to memory-resident overlays; communicates with native-compiled code through a jump table; provides for global data, shared data, and stack; and handles multiple users running on shared sets of overlays.

Price: Available upon request

Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

P–LANDS (68000/68010 Pascal Language Development System)

Operating System: VMS

Keywords: • Cross-compilers • Debugging • Microprocessor development • Programming tools

This Tektronix package, which supports the entire design cycle, consists of the Pascal Language Directed Editor (LDE), the 68000/68010 Pascal Compiler with the Integrated Control System (ICS), and the 68000/68010 Pascal Debug. Also included in the package is a 68000/68010 assembler, linker, library generator, lister, and cross-reference lister.

The Language Directed Editor combines the text-manipulation functions of a general-purpose editor with the syntax-checking function of a compiler. With LDE, you can check the syntax of the text entered and eliminate repeated compiler passes for syntax checking.

Designed for users writing programs for a microprocessor, the 68000/68010 Pascal Compiler translates statements written in Pascal to object code for the 68000 and 68010 processors. The Pascal Compiler implements the proposed ISO Standard Pascal, with the addition of microprocessor extensions. Included with the Pascal Compiler is an Integration Control System (ICS), which simplifies the software/hardware integration process. ICS allows the programmer to specify implementation-specific requirements, such as interrupt vectors, and creates the necessary object modules and linker commands.

The 68000/68010 Pascal Debug is a real-time symbolic debugging tool for programs written in Pascal. Pascal Debug (PDB) allows the programmer to use Pascal constructs to display and modify variables, control program execution, and record and display debug information.

Price: $15,000
Contact: Local Tektronix Representative
—
TEKTRONIX, INC.
Walker Road Industrial Park, P.O. Box 4600, MS 92–635
Beaverton, OR 97075

Pacer C Cross-Compiler for Motorola 68000

Operating System: VMS
Keywords: • Compilers • Cross-compilers • Diagnostics • Microprocessor development

This package, developed by Pacer Systems, contains a binary version of the Pacer Systems C68000 Cross-Compiler, which generates code for M68000 microcomputers on VAX computers. The compiler's executable code is provided in both shared and nonshared formats. The cross-compiler generates standard M68000 (EXORMACS-compatible) assembly source language.

This package has full implementation of C language; provides excellent compiler diagnostics; produces highly optimized, compact object code; and includes a rich subset of UNIX*-compatible libraries. This compiler was originally developed under contract by Prime Computer and requires the M68000 cross-assembly system from OASYS.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

Pascal–2™ Cross-Compiler to Target 68K with Concurrency Package

Operating System: VMS
Keywords: • Cross-compilers • Engineering • Programming tools • Signal processing

The Pascal–2 cross-compiler allows development of programs for the MC68000™ from the PDP–11 or the VAX environment. The cross-compiler generates object files, using the Motorola S-record format, which can be linked and run under the VERSAdos™ operating system or in stand-alone mode by means of a special support library, supplied as part of the concurrent programming option. The cross-compiler generates extremely small and fast code. The package includes XFR, a utility that transfers object, text, or other files in either direction between the host system and VERSAdos.

Operating in five phases, the cross-compiler uses virtual-memory techniques to allow compilation of large programs. Optimizations include global register allocation, constant folding, dead-code elimination, short-circuit evaluation, expression targeting, array index simplification, and common subexpression elimination.

Documentation consists of the *Pascal-2 User Manual* and the textbooks *Programming in Pascal* and *Pascal User Manual and Report.*

Software support is included for one year from purchase (renewable).

An optional concurrent programming package provides concurrent programming in standard Pascal and allows user programs to run without an operating system on the MC68000. A cross-linker/assembler is also available.

MC68000™ and VERSAdos™ are trademarks of Motorola, Inc.

A version of this product is available for the PDP–11 computer.

Price: $6300 – $7500
Contact: Sales Department
(503) 245–2202
OREGON SOFTWARE
6915 S.W. Macadam Avenue
Portland, OR 97219

Pascal Formatter

Operating System: VMS
Keywords: • Programming tools

This program implements a technique whereby subsequent lines of a structure are indented with respect to the first — a common way of displaying tree structures. Comments are generally aligned on the right half of the lines. The program is portable, is written in Standard Pascal, and formats many Pascal fragments as well as complete programs; thus, the program may be used during program development.

Besides a portable version, specific versions are included for DECUS Swedish Pascal under RSX–11M, for Oregon Software Pascal 2 under RSX–11M, for VAX Pascal, and for UCSD Pascal.™ The formatting technique provides a simple but powerful method of confirming manually the correct number of "end" symbols at the end of nested structured statements, giving the programmer a way of detecting and correcting errors early in the coding.

Extensive documentation is provided in documentation files and in the source code in comments. DECUS number 11–725.

UCSD Pascal™ is a trademark of the University of California.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

PAWS (Performance Analyst's Workbench System)

Operating System: ULTRIX–32, VMS
Keywords: • Communications • Networking • Operating systems • Simulation

PAWS is a computer system modeling package for performance-oriented design, capacity planning, and configuration management. PAWS provides all the features necessary for modeling communications networks, distributed processing systems, data base systems, multiprocessors, and advanced, complex, unusual system architectures. PAWS operates on all systems with an ANS–1966 (or ANS–1977) FORTRAN compiler and a user-program address space of one megabyte.

The PAWS model definition language is simple and very high level. The user specifies major computer system features that PAWS understands but is not required to code detailed algorithms. Nevertheless, PAWS is extremely flexible; the user may extend the language with user-written FORTRAN subroutines. PAWS generates all the statistics necessary for performance evaluation, including statistic distributions not available from analytic tools. The PAWS source code is provided.

PAWS runs on most mainframes and large minicomputers. The PAWS models developed by the user are stored as text files that may be transported easily from one type of computer system to another. PAWS may be used to analyze virtually any computer or communication system. Additional purchases by an organization are significantly discounted. Free training, consultation, documentation, and hot-line services are included.

Price: $17,900
Contact: Doug Neuse
(512) 474–4526
INFORMATION RESEARCH ASSOCIATES
911 West 29th Street
Austin, TX 78705

PCDRIVER and PCACP (Supporting ACP)

Operating System: VMS
Keywords: • Debugging • Device drivers/handlers • Diagnostics

PCDRIVER is a driver for the PC11 paper tape reader/punch for VAX systems. The driver allows independent control of the reader and punch, error logging, and power-fail recovery. PCACP is an ACP that can be used with PCDRIVER. However, the driver can perform all its functions without the ACP. The ACP serves as a template from which other ACPs could be written.

Documentation is on magnetic media. DECUS number VAX–4.

Price: $5 – $225
Contact: DECUS (see Introduction)

PDS (Pascal Development System)

Operating System: VMS
Keywords: • Data base management • Data entry • Documentation • Programming tools

PDS has all the tools necessary to develop commercial software in Pascal and allows users to establish a data base and parameterized data entry and reports. Some PDS features are a complete multiuser ISAM-type File Manager with utilities, file definitions that may be changed without changing programs, parameterized screen entry and editing, parameterized reports that may be changed without changing programs, approximately 50 utility programs and procedures for flexible use and handling of standard programming needs, and parameterized CRT routines that allow mixed CRTs on the system. The system is designed for interactive menu-driven systems and has self-documenting features. PDS is field tested and has been used to develop complex accounting systems.

This system comes free with the purchase of TBS Accounting Software.

A version of this product is available for the PDP–11 computer.

Price: $650 – $1500
Contact: Chuck Tebbetts
(818) 242–7981
THETA BUSINESS SYSTEMS
1110 Sonora Avenue, Suite 106
Glendale, CA 91201

PDS/11

Operating System: VMS
Keywords: • File management • Production control • Programming tools

PDS/11, developed by McCue Systems Inc., is the low-cost way to speed up software development on your VAX/VMS system. If you are running VMS V3.0 or later and/or using DIGITAL's FMS–11 (Forms Management System), you should consider the advantages that PDS/11 has to offer.

A history command reduces retyping frequently used commands. EDT as a DCL command editor modifies any command from the history log. Five selectable command prompts provide constant system information.

The DCL SPAWN command runs lengthy compiling and linking jobs in the background. The compact code requires less than 100K disk space. Easy customizing considers site-dependent factors. All source code is provided with the system.

PDS/11 is easy to learn and use. Programmers find the additional commands completely natural as an extension of VMS/DCL.

Price: $800
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

Peregrine Four

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Application development • Data base management • Programming tools • Report writer

Memory required: 500K plus 50K/user. Distribution medium: 9-track 1600 bpi magnetic tape.

This family of products allows the user to develop and maintain business applications software. Peregrine Four includes an applications generator, a relational data base management system, a report writer, an active in-line data dictionary, and a run-time environment.

Peregrine Four allows both sophisticated users and novices to design applications. The system reduces the complexity and number of steps in each function by providing a 2-dimensional view of each function and by providing a complete, orthogonal set of building blocks for building commercial applications. The user can build the application in nonprocedural form, using predefined, high-level application function panels. If an application needs more complexity, BASIC-like programming statements can be embedded in the application.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $28,000
Contact: Leslee Mills
(714) 855–3923
PEREGRINE SYSTEMS, INC.
15530 Rockfield Boulevard, Building C
Irvine, CA 92718

Performance and Coverage Analyzer

Operating System: MicroVMS, VMS
Keywords: • Data collection • Debugging • Programming tools

The VAX Performance and Coverage Analyzer is a tool to help VMS and MicroVMS users analyze the execution behavior of their applications and tune the performance and testing of their programs. The analyzer is not a tool for analyzing operating system performance or for hardware resource planning. Rather, the program's two functions are to pinpoint execution bottlenecks and other performance problems in

applications and to provide test coverage analysis by measuring what parts of a software program are or are not executed by a given set of test data.

The VAX Performance and Coverage Analyzer consists of the collector, which gathers performance or test coverage data on the running software program, and the analyzer, which later processes and displays the collected data. The collector gathers the performance data and writes that information to a data file. After the data has been collected, the analyzer can be run using that data file for input. The analyzer is a separate program that reads the data file produced by the collector and presents the results as performance histograms or other displays.

Refer to SPD 26.76.xx when requesting further information on this product from you local DIGITAL sales office.

Price: $1400 – $10,000
Contact: Consult your local DIGITAL sales office (see Introduction).

Phi-Analyzer

Operating System: MicroVMS, ULTRIX–32, ULTRIX–32m
Keywords: • Debugging

Memory required: 150K bytes. Distribution media: diskette, streaming or magnetic tape.

This interpretive tool, written in C, facilitates the debugging and testing of programs that are written using PHILON FAST/Compilers. The Phi-Analyzer enables a programmer to go through the object-code generator and optimizer only once after the debugging process has been completed.

Software features include:

- Single stepping. Source code can be executed through the Phi-Analyzer one statement at a time. Easy-to-understand error messages allow a programmer to identify the problem and its location.
- Variable monitoring. As many variables as desired can be simultaneously monitored by a programmer. The new values of the variables are immediately displayed as the program is processed.
- Variable modification. Values of variables can be modified at breakpoints. This feature is particularly useful in testing seldom used and error condition routines in the application program, eliminating the need for extensive test data bases.
- Profiling. A programmer can monitor the number of times a statement is executed.

Price: $180 – $1000
Contact: Irene Lebovics
(212) 807–0303
PHILON INC.
641 Avenue of the Americas
New York, NY 10011

PMM (Paged Memory Manager)

Operating System: ULTRIX–32, VMS
Keywords: • Programming tools

PMM creates a software implementation of a virtual memory-management system based on fixed-length blocks of memory. An initial allocation of main memory holds blocks that can be "paged" to and from a system disk file. The PMM supports multiple users and is simpler and faster than Storage Manager (STM). The PMM makes greater demands on the calling programs, since they are responsible for lock/unlock operations, marking "dirty" pages (those to be updated on disk), and partitioning allocated pages into smaller working units. PMM is ideal for fixed-length system applications.

Paged Memory Manager allows the user to keep an in-memory cache of the definable number of blocks; use the disk work file to page blocks that overflow the cache; create blocks, get block numbers and memory addresses, give blocks priority to control swapping, use the LRU algorithm to swap blocks of equal priority, lock blocks into memory, release a block, delete a block, or ensure that a block is in memory; and use macros to turn a block number and offset into one number and turn the number into a memory address.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

POPLOG

Operating System: UNIX* (Berkeley), VMS
Keywords: • Artificial intelligence • Compilers • Robotics

Memory required: 1.5MB min. Distribution medium: magnetic tape.

This integrated, interactive, multipurpose, program development environment includes compilers for several artificial intelligence languages and a sophisticated multiwindow screen editor. On-line documentation, in the form of help files, teaching files, and reference documentation and many on-line program libraries providing utilities and demonstration programs are included.

Incremental compilers are provided for PROLOG, POP–11, and LISP. The system supports interactive, mixed-language programming. The languages provide facilities for list and array processing, garbage collection, pattern matching, logical inference, number crunching, and sophisticated control structures. Programs written in other languages may be linked in. The editor serves as a general-purpose interactive front end and supports general text processing and program development.

POPLOG is used for teaching and research in artificial intelligence, including image processing, speech processing, and expert-system design. POPLOG is part of the infrastructure for the British National Project in Information Technology and the Science and Engineering Research Council.

For educational sales, contact Prof. A. Sloman (0273–606755), Cognitive Studies Programme, University of Sussex, Brighton, BN1 9QN, England.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $1000 – $10,000

Contact: POPLOG Sales
0276–62244
SYSTEMS DESIGNERS LTD.
1 Pembroke Broadway
Camberley, Surrey GU15 3XH
England

Powerhouse

Operating System: VMS

Keywords: • Application development • Data base management • Data dictionary • Data entry

This dictionary-driven, fourth-generation application development language includes QUICK, a screen processor; QUIZ, a report writer; and QTP, a volume transaction processor. Powerhouse English-like statements permit applications to be built in a fraction of the time required for building COBOL and FORTRAN applications. Productivity during application development is achieved through centralized data dictionary control of data definition and data management functions. Powerhouse, written in C, provides the advanced capabilities for experienced users and allows users without technical training to take an active role in application development.

Price: Available upon request

Contact: Robin McNeill
(613) 237–1440
COGNOS
275 Slater Street, 10th Floor
Ottawa, Ontario K1P 5H9
Canada

PRM–11 (Pascal Record Management)

Operating System: VMS

Keywords: • File management • Software utilities

Memory required: 1KW plus RMS–11 plus user code.

This set of routines, written in Oregon Software Pascal-2 (with an additional assembly-language module) to interface user programs written in Pascal-2 to RMS–11, is a conversion of DECUS number 11–479 from Pascal-1 to Pascal-2, Version 2.1. The package provides high-level interface commands and keywords implemented through externally defined procedures to create and allow access to RMS file types (sequential, relative, and indexed). The user calls PRM routines, which in turn call the required RMS routines. The PRM routines are linked at task-build time with the user code. DECUS number 11–691.

Restrictions: Implemented and tested on RSX–11M V4.0, PRM–11 also runs on VAX/VMS in compatibility mode, except that shared files may not be opened with write access, due to restrictions of the compatibility-mode emulation. PASMAC.MAC (a MACRO definitions module for Pascal-2) belongs to Oregon Software but is supplied with each Pascal-2 license.

Note: For support under Pascal-1, see DECUS number 11–479.

Price: $5 – $225
Contact: DECUS (see Introduction)

PRO–IV

Operating System: VMS
Keywords: • Application development • Programming tools

Memory required: 26K bytes. Distribution media: 9-track 1600 bpi magnetic tape, RL02, RX01, TU58 DECtape II cartridge.

This applications processor enables systems analysts to develop efficient commercial applications. (An applications processor is an operating subsystem that processes applications by linking machine language run-time modules from the user's applications description and parameters.) PRO–IV allows users to create new applications or modify existing ones.

PRO–IV features:

- A single, consistent environment for commercial applications development
- Easy movement of applications across RSX–11M, RSX–11M–PLUS, RSTS/E, and VAX/VMS operating systems
- A well-defined and controlled vocabulary to define application input screens, output reports, the application data base, and the functions that make up the application procedure
- Automatically produced documentation for all applications generated
- On-line self-documenting maintenance of existing applications written in PRO–IV
- More than 100 memory-resident machine language modules to define the basic functions of business applications
- Creation of applications by forming linkage tables of these basic modules

DIGITAL distributes this product under license from Data Technical Analysts, Inc.

Refer to SPD #A3.73.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1500 – $18,000
Contact: Consult your local DIGITAL sales office (see Introduction).

PRODUCER

Operating System: MicroVMS, VMS
Keywords: • Graphics • Interpreters • Pre- and postprocessors • Programming tools

Memory required: 1MB. Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

VAX PRODUCER allows users to create visually based interactive programs, such as computer-based instruction (CBI) and point-of-purchase, marketing demonstration, or information-retrieval systems. VAX PRODUCER programs include a visual component created by the VAX DRAW Graphics Editor and an interactive/branching component created using the VAX DESIGN Development Language. VAX DRAW allows a user to create screen displays and to store them in a file called a display library. The VAX DESIGN Development Language is used to control the interaction with the user and what happens as a result. VAX DESIGN source programs are preprocessed and are linked into a file containing a pseudo–machine language that is system and address space independent. Programs written in the VAX DESIGN Development Language on a VAX/VMS or MicroVMS system can be run without modification on any system with a VAX PRODUCER Interpreter, which reads from the pseudocode file and display library to present the information and to interact with the user.

Refer to SPD #26.52.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $60 – $21,000
Contact: Consult your local DIGITAL sales office (see Introduction).

PROGRESS

Operating System: ULTRIX–32
Keywords: • Application development • Data base management • Programming tools

PROGRESS is both a relational data base management system and a high-level programming language. The two aspects provide an environment for building complex business applications. Targeted to software developers and value-added resellers, PROGRESS is faster than COBOL or BASIC.

A version of this product is available for the PDP–11 computer.

Price: $1950
Contact: Joseph Alsop
(617) 663–6500
DATA LANGUAGE CORP.
5 Andover Road
Billerica, MA 01821

Prolog-1 (Programming in Logic)

Operating System: VMS
Keywords: • Artificial intelligence • Interpreters
Distribution media: 8″ diskette, magnetic tape.

Prolog-1 is a language suitable for applications requiring the simulation of intelligence — for example, expert systems, deductive data bases, language processing, robotic control, planning systems, design applications, and areas of artificial intelligence. Prolog-1 is not an algorithmic language, such as COBOL or Pascal, but rather is based on the concepts of formal logic (predicate calculus) and thus dispenses with goto, do-for, while, assignment, and reference and instead incorporates the mechanisms required by intelligent programs. A Prolog program describes the problem in terms of facts, relationships, and rules and uses them to generate solutions to the problem.

Prolog-1 is written in VAX/VMS assembler and Prolog or PDP assembler and Prolog.

A version of this product is available for the PDP–11 computer.

Price: £1100 – £3000
Contact: Mark Lewis
(0865) 242206
EXPERT SYSTEMS INTERNATIONAL LTD.
9 West Way
Oxford, Oxon OX2 OJB
England

PYTHON Software Development Tools

Operating System: VMS
Keywords: • Data base management • Forms management
• Menu handlers • Programming tools

This set of program development tools integrates the power of the VAX/VMS operating system, the FMS–11 Forms Management System, and the ORACLE Relational Data Base Management System. PYTHON, developed to support the implementation of medium to large-scale data base application systems, simplifies, optimizes, and generalizes the program interface to ORACLE and provides an interactive user interface that is easy to use. PYTHON enhances productivity by providing a set of generic subroutines that perform common functions throughout the application system, thus simplifying the application programming task.

Price: $5000 – $20,000
Contact: Robert Carey
(415) 845–5200 ext. 559
TERA INFORMATION ENGINEERING CORP.
2150 Shattuck Avenue
Berkeley, CA 94704

Q–CALC

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Spreadsheets

This UNIX*-based spreadsheet program, designed on a VAX, is available on many M68000-based workstations. Commands are shown on the screen in menus, and the program has many business and scientific functions. A user can do complete consolidation across spreadsheets. Q–CALC has symbolic naming and a large spreadsheet size. Up to 16 windows are permitted. Many formatting options and seven currency symbols are provided. A complete set of business graphics, including pie, bar, line, XY, and commodity graphs, is also available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1550
Contact: Ellis Horowitz
(213) 659–1560
QUALITY SOFTWARE PRODUCTS CO.
348 S. Clark Drive
Beverly Hills, CA 90211

RAPID/USE (Rapid Prototyping of Interactive Dialog)

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Forms management • Interpreters
• Programming tools

RAPID/USE is a tool for the rapid specification and implementation of screen-oriented interactive dialogs and the rapid construction of interactive information systems. RAPID/USE is independent of specific application areas or industries and is best suited for applications involving alphanumeric displays in which user-interface design is important.

Interactive dialogs are modeled with augmented state transition diagrams. Those diagrams, encoded for the Transition Diagram Interpreter, allow the specification of system output, user input, and associated actions. Actions may be programmed in C, Pascal, FORTRAN–77, or PLAIN and may be linked into an executable program with the Action Linker.

The Transition Diagram Interpreter allows prototypes of dialogs to be rapidly constructed and modified. The Action Linker provides the ability to build complete systems by linking in programmed actions — including data base operations — to the resulting system.

RAPID/USE is part of the User Software Engineering distribution tool set. Commercial support and training are provided.

An unsupported distribution is available from User Software Engineering Distribution, University of California, San Francisco, Medical Information Science, Room A–16, San Francisco, CA 94143.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $8000
Contact: Anthony I. Wasserman
(415) 666–2951
INTERACTIVE DEVELOPMENT ENVIRONMENTS, INC.
44 Monterey Boulevard, Suite 32
San Francisco, CA 94131

REX–C/86 Language Package

Operating System: MicroVMS, ULTRIX–32, ULTRIX–32m, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Assemblers • Cross-compilers • Microprocessor development

Distribution medium: 1600 bpi magnetic tape.

The REX–C/86 package, a member of the REX–TOOLS development package, gives the system designer an integrated C programming environment for 8086/80186-based systems. The standard package contains a C cross-compiler XC86 for Intel iAPX 86/186 microprocessors, a portable library source, and the REX–SMA/186 structured macro assembler package, which contains a macro assembler (XASM86) for 8086/8087/80186 microprocessors, an object code linker (XLINK86), an object code locator (XLOC86), and an object code librarian (XLIB86). REX–C/86 runs on VAXs under the VMS or UNIX* operating system and on UNIX*-based 68000 supermicrocomputers.

The XC86 C compiler supports the full C language as described in Kernighan and Ritchie's book *The C Programming Language*, Prentice-Hall, 1978, as well as enhancements. The compiler supports separate compilation and operates on an input C source file in two phases and outputs optimized ROMable, reentrant object code for the real-time environments.

The portable library contains a full set of the standard UNIX*-compatible I/O (STDIO) routines, numerous useful routines, such as code conversion and string manipulation routines, and a mathematic library that supports the 8087 Numeric Data Processor extension.

Both the XC86 C compiler and the XASM86 macro assembler produce object modules in OMF format that can be linked, located, or combined by XLINK86, XLOC86, and XLIB86. The XLOC86 locator produces absolute code in Intel Absolute Object File Format. As a result, any object code modules produced by Intel language processors, such as PLM86, and Intel utilities, such as LINK86 and LIB86, can be processed by REX–SMA/186's object code linker, locator, and librarian.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $6750 – $12,950

Contact: Wilson Chan
(714) 241–8650
SYSTEMS & SOFTWARE, INC.
3303 Harbor Boulevard, C–11
Costa Mesa, CA 92626

REX–PLM/86 PL/M Language Package

Operating System: MicroVMS, ULTRIX–32, ULTRIX–32m, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Assemblers • Cross-compilers • Microprocessor development

Distribution medium: 1600 bpi magnetic tape.

This member of the REX–TOOLS development package contains an Intel-equivalent PL/M–86 cross-compiler (XPL/M–86) for Intel iAPX 86/87/88 microprocessors and the REX–SMA/186 structured macro assembler package. REX–PLM/86 is ideal for real-time embedded system applications. The compiler generates more efficient code than the Intel PL/M–86 compiler and is designed for dedicated ROM-based applications. REX–PL/M/86 runs on DIGITAL's VAX–11 minicomputers under VMS or UNIX* and on 68000-based supermicrocomputers running UNIX*.

The REX–PL/M/86 implements a superset of the Intel PL/M–86 language. The following features have been added to the original PL/M–86 language:

- Use of reserved words for a program variable name
- C language–like structure that supports structure within structure
- Support for the SQRT and PI built-in functions for real-number computation
- Allowance for a premature loop exit, using the UNDO statement

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $7500 – $14,750
Contact: Wilson Chan
(714) 241–8650
SYSTEMS & SOFTWARE, INC.
3303 Harbor Boulevard, Suite C–11
Costa Mesa, CA 92626

REX–SMA/186

Operating System: ULTRIX–32, VMS
Keywords: • Assemblers • Microprocessor development • Programming tools • Project management

Distribution medium: 1600 bpi magnetic tape.

This relocatable macro cross-assembler supports development for Intel 8086, 8087, 8088, 80186, and 80188 microprocessor applications. The package contains five utility programs: an Intel-compatible macro assembler, XASM–186; a cross-linker, XLINK–186; an absolute object code locator, XLOC–186; an object code librarian, XLIB–186; and a menu-driven command interface.

XASM–186 is compatible with Intel's ASM–86 at command, source code, and relocatable object code levels. XASM–186 supports type checking, data structure facilities, and macro processing capabilities and provides full address segmentation control at both the logical and physical levels. Logical segmentation gives the designer full control in partitioning program modules into logically separated segments without regard to actual physical address placement.

XASM–186 generates Intel-compatible MCS–86 relocatable object module format that can be linked, located, or combined by XLINK–186, XLOC–186, and XLIB–186. Furthermore, any object code modules produced using Intel language processors LINK–86 and LIB–86 can be processed by REX–SMA/186's object code linker and librarian. Debugging information, such as symbols for both local and global variables, may be included in the object code module by the REX–SMA/186 utilities. The resulting absolute object code module produced by the XLOC–186 may contain symbol table records that are directly compatible with Intel's In-Circuit-Emulator.

A version of this product is available for the PDP–11 computer.

Price: $3750 – $4750
Contact: Dr. Y. P. Chien
(714) 241–8650
SYSTEMS & SOFTWARE, INC.
3303 Harbor Boulevard, C–11
Costa Mesa, CA 92626

REX–SP/86 SoftProbe Simulator/Debugger Package

Operating System: MicroVMS, ULTRIX–32, ULTRIX–32m, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Debugging • Microprocessor development

Distribution medium: 1600 bpi magnetic tape.

SoftProbe/86 is an interactive symbolic software emulator for debugging and analyzing programs written for the Intel iAPX–86/88 microprocessors on a PDP–11 or VAX minicomputer. SoftProbe/86 allows the design team to perform software design, coding, compilation, and program logic testing that benefit from the multiuser and multitasking capability of the PDP–11, VAX, and 68000-based UNIX* supermicrocomputers.

SoftProbe/86 extends the traditional debugging facilities, such as program execution control, program trace, and breakpoint, to facilitate the debugging of programs in high-level languages. To do so, it provides the designer capabilities to reference program objects by their symbolic names and types the same way as they were created in the source program. SoftProbe/86 supports primitive data types of BYTE, WORD, POINTER, data types of the 8087 coprocessor, as well as extended data types and data structures as are defined in high-level language.

For machine-level emulation, SoftProbe supports simulation of R/W and read-only memory. I/O simulation may be done using the host devices or simply as a byte bucket. Interrupt simulation is supported by an optional built-in 8259 Priority Interrupt Controller — PIC simulator. Program execution and program flow history are controlled by six trigger registers that can monitor simulated bus transactions, including memory read/write, I/O, interrupt acknowledge, and so on. Program breakpoints can be complex events using logical combinations of the trigger registers. Furthermore, program flow history can be viewed by displaying the trace memory, which can store up to 1024 program steps before the breakpoints. Program steps may be assembly language instructions or high-level language statement numbers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $4750 – $8550

Contact: Wilson Chan
(714) 241–8650
SYSTEMS & SOFTWARE, INC.
3303 Harbor Boulevard, C–11
Costa Mesa, CA 92626

RIMS/MPG–PLUS

Operating System: VMS
Keywords: • Application development • Data dictionary • Programming tools

This complete application program–generating system can be used by both nonprogrammers and programmers to quickly and easily create ready-to-use business-oriented application programs and the source code for those programs in a variety of DIGITAL-based operating systems and language compilers. The complete RIMS/MPG–PLUS system consists of eight key software modules, including a data file definition and seven program-generating modules. The RIMS/MPG–PLUS user can generate programs using either single or multiple data files. The types of application programs generated are for data entry, reports, sorting, transaction processing, graphics, menus, and file reorganization.

RIMS/MPG–PLUS–generated programs are readily moved from the computer for which they were created to any other computer using the same language compiler. RIMS/MPG–PLUS need not reside on the "recipient" computer in order for programs created on another "host" computer to work.

This interactive multifile application program–generating system can easily be "superimposed" over any existing data file handling/access and/or other input/output-related method. The system's "protocol file" design concept ensures that all input/output-related functions, including data file handling/access methods, are completely independent of the program-generator modules.

A version of this product is available for the PDP–11 computer.

Price: $5750 – $19,750
Contact: Sales Department
(412) 262–5507
INFORMATION AND SYSTEMS RESEARCH, INC.
410 Rouser Road, Airport Office Park, Building #1
Coraopolis, PA 15108

RTEM–11 (RT–11 Emulator for RT–11, Version 5.1)

Operating System: VMS
Keywords: • Assemblers • Compilers • Debugging • Programming tools

Memory required: 32KW minimum. Distribution media: RX01, TU58 DECtape II cartridge.

RTEM–11 provides the RT–11 program development environment on RSX–11M, RSX–11M–PLUS, and VAX/VMS. RTEM–11 runs in compatibility mode on VAX/VMS systems and allows several users to develop RT–11 applications concurrently on a host system. The number of users depends on CPU power and system activity. Application programs can be created, edited, assembled, and linked on RTEM–11 and then executed on RT–11.

Refer to SPD #30.21.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $315 – $1000
Contact: Consult your local DIGITAL sales office (see Introduction).

RTUTIL

Operating System: VMS
Keywords: • Data base management • Data conversion • Programming tools

The RTUTIL library, developed by Contel, is an object library of data management routines that can be linked with user-written MACRO, FORTRAN, and Oregon Software Pascal programs. RTUTIL handles all major functions, including screen formatting, input conversion, and so on.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

RuleMaster™

Operating System: VMS
Keywords: • Application development • Artificial intelligence • Diagnostics

Memory required: .250MB.

This software tool for building expert systems is written in C. The user can construct rule-based advisory or diagnostic aids for applications. RuleMaster has the power to produce industrial-scale, cost-effective solutions to today's cognitive or rule-based problems.

The system can automatically generate rules from examples provided by the user. RuleMaster can run on most computers that use the C language and can interface to programs written in other languages. RuleMaster also explains why a rule was generated. Also included is the ability to hierarchically order modules and have a multistate system.

Price: $5000 – $25,000
Contact: Ben Finkel
(512) 454–4797
RADIAN CORP.
P.O. Box 9948
Austin, TX 78766–0948

S–TRAN™ BASIC to C Translator

Operating System: Independent, VMS
Keywords: • Compilers • Interpreters • Microprocessor development • Translators

S–TRAN, developed by Software Manufacturing, consists of a translator package (preprocessor, translator, and postprocessor) and a runtime package and is available in binary format. S–TRAN, or Source Translator, accepts any application system, such as accounting software or vertical application, written in popular BASIC dialects, such as OASIS BASIC or Microsoft MBASIC, and produces an identical C-based version, which can execute under UNIX* and non-UNIX* environments.

S–TRAN accepts as input each application module and converts it to a functionally equivalent C source code program that conforms to the widely adopted Kernighan and Ritchie C definition. Modifications can be made to BASIC programs that are retranslated, or maintenance can be performed directly on the C version.

The generated C source code uses standard C libraries in addition to special features, such as ISAM support and terminal independence, and advanced features, such as CHAIN with COMMON, RSET, LSET, MID$, RPAD, LPAD, LINE INUT, PRINT USING, ON ERROR GOTO, and others.

Generated C code can be processed with our compilers; all OASYS software debugging tools are applicable. S–TRAN is written in C, can be easily ported, and easily accommodates other dialects of BASIC.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

Safe C Statement-Level Profiler™

Operating System: ULTRIX–32, VMS
Keywords: • Compilers • Debugging • Programming tools

This program development tool counts the number of times each statement in a program is executed during a run of the program. The Profiler can be useful during debugging by showing where a program spends its time. For example, the Profiler can show the number of times a particular loop is executed, how many times each branch of a conditional is taken, which parts of the program are executed most often, and which parts of a program have never been exercised.

The control of the Safe C Profiler differs from the control of the standard UNIX* system profiler. The standard profiler reports only the number of times each function is called. That profiler is inadequate for finding unexecuted statements or for answering how many times a particular statement has been executed. Also, the standard profiler works by repeated sampling of a program; in order for its output to be valid, a program has to be run many times.

By contrast, the Safe C Profiler reports an exact count for each statement monitored. The Profiler can be applied selectively to individual modules and to particular functions within a module. An auxiliary command displays the profiling results alongside the statements of the original source code.

The Safe C Profiler is easy to use and similar to the UNIX* profiler. No changes are required in the source code to enable profiling.

A version of this product is available for the PDP–11 computer.

Price: $400 – $1200
Contact: Donald D. French
(617) 497–2160
CATALYTIX CORP.
55 Wheeler Street
Cambridge, MA 02138

SAI–SDDL™

Operating System: VMS
Keywords: • Documentation • Language processors
• Programming tools • Project management

Distribution medium: 9-track magnetic tape.

Science Applications International Software Design and Documentation Language (SAI–SDDL) aids in the design and documentation of complex, structured, information-intensive systems and software. The system generates documents automatically, augmented with summaries, such as a table of contents, a module cross-reference listing, and a module invocation tree. A user-defined cross-reference can be easily specified. Processor outputs are enhanced with indentations based on structure logic and arrows accentuating flow control. That results in a 2-dimensional representation having the best features of a flowchart without the attendant disadvantages.

SAI–SDDL provides an automated design medium that facilitates communication by allowing user-defined keywords and by processing natural-language statements. The system supports structured design constructs, a top-down approach, and the iterative process of software design.

As a documentation aid, SAI–SDDL operates directly on FORTRAN, Pascal, or SIMSCRIPT source code to produce up-to-date documentation. Further, by providing a standardized format for viewing software, SAI–SDDL facilitates structured walkthrough, verification, and validation.

The SAI–SDDL processor is coded in Pascal and has been benchmarked up to 20 times faster than the original version of SDDL. The memory requirements vary linearly with input file size, and the executable module requires 120 blocks of storage. SAI–SDDL is distributed in executable and binary form with test cases and results. Installation instructions and a user instruction manual are included.

Price: $2500 – $5000
Contact: Donald A. Heimburger
(619) 456–6048
SCIENCE APPLICATIONS INTERNATIONAL CORP.
1200 Prospect Street, P.O. Box 2351
La Jolla, CA 92038

SB–5 (System Builders–5)

Operating System: VMS
Keywords: • Programming tools • Project management

These programs automate the design, production, documentation, and maintenance of COBOL-language applications software. The system permits interactive entry of design and program function parameters and user-added COBOL for description file layouts and all program types. From those parameter files, SB–5 generates design documentation, source COBOL-language programs, and English-language descriptions of program functions. Parameter files created on any supported system can generate equally valid source COBOL code on any other supported system or systems, provided that the necessary licenses have been obtained.

The SB–5 system permits screen, report, and form layouts to be "painted." In addition to designing, producing, and documenting the desired applications software, SB–5–generated documentation includes screen and report previews, five levels of program and operating documentation, and project management statistics reports.

The SB–5 system offers versions integrated with RMS files, CDD files and selected data base management systems.

A version of this product is available for the PDP–11 computer.

Price: $12,000 – $23,000
Contact: David J. Hirschfeld
(201) 340–9893 or (800) 526–0161
BUSINESS CONTROLS CORP.
3–7 West First Street
Clifton, NJ 07011

SCCS (Source Code Control System) for Virtual UNIX*

Operating System: UNIX* (Berkeley)
Keywords: • Source code control

This system provides a complete audit of changes made to program sources or documents on your UNIX* system. SCCS prevents multiple programmers from changing the same program and subsequent edits being overwritten. Version and date stamps within compiled object and executable files permit verifying the actual version of a program being tested.

Reports include histories of changes for each file or specific changes for a version. Any version of a file may be extracted, by version number or by changes made until a cutoff time, and retrieved.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $2500
Contact: Uniq Sales Department
(312) 879–1008
UNIQ DIGITAL TECHNOLOGIES
28 S. Water Street
Batavia, IL 60510

SCOPE — Forms Management System

Operating System: VMS
Keywords: • Data entry • Forms management • Programming tools • Text management

This interactive programming aid provides all the tools necessary to create terminal screen formats and to quickly use them with new or existing application programs. SCOPE's intrafield editing permits the user to change specific parts of a field and eliminates the need to retype the complete field. Line drawing encloses fields in a box or separates areas of a form. Partial-field duplication duplicates specific parts of a field from previous contents rather than duplicates the entire field. Multiform displays allow more than one form to be displayed on the terminal screen at one time. Terminal type memory remembers the kind of terminal previously used. Cursor movement by arrow keys allows freedom when creating or modifying forms. Stand-alone screen testing tests forms before an application has been written. The cut-and-paste editor moves fields about the form. Discrete value data

checking allows most data validation to take place within SCOPE. I/O ahead checking and color support for more advanced applications are also provided.

SCOPE's improved editor makes creating formatted user interfaces a simple process. The editor, using a form-painting concept in conjunction with cut-and-paste capabilities, allows the user to create or change parts of the formatted screen and then moves these parts about to obtain the desired image. In addition, the user can switch from a general, full-screen form image to a detailed description of a particular field. The editor provides the user with concise, automatic forms documentation, which includes a complete description of the position, text, and attributes of the form and a record description of the application interface for each form.

Price: Available upon request
Contact: Gary M. Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

SDDL (Software Design and Documentation Language)

Operating System: VMS
Keywords: • Documentation • Project management • Software utilities

SDDL provides an effective communication medium to support the design and documentation of complex software applications. SDDL supports communication among the members of a software design team and provides for the production of informative documentation on the design effort. SDDL ensures that accurate documentation will be available throughout the software life cycle. SDDL offers an extremely valuable capability for the design and documentation of complex programming efforts ranging from scientific and engineering applications to data management and business systems.

Price: $855
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

SDSU — AskLib: User Prompt VAX FORTRAN–77 Routines

Operating System: VMS
Keywords: • Application development • Data entry • Software utilities

This collection of VAX FORTRAN–77 routines can be used in interactive programs to prompt a user for input, accept user input, and check the validity of user responses. The routines handle additional details, such as converting input, displaying error messages, reprompting and looping, processing nested input files, and, if enabled, logging input to a journal file.

Through the calling arguments, the programmer specifies exact prompts, criteria for determining the validity of user responses, whether defaults are allowed or input is required from users, whether users can back up to previous questions, and whether the program can be exited early. Separate routines exist for each of the following data types and entry formats: string, real, integer, yes/no, table of reals, file name, list of choices, angle (including longitude/latitude), and phone number. DECUS number VAX–106.

Price: $5 – $225
Contact: DECUS (see Introduction)

SISINF

Operating System: VMS
Keywords: • Data base management • Information management • Language processors • Programming tools

SISINF is an integrated product with a universal fourth-generation programming language, a data base management system with up-to-date technology, and numerous user aids and utilities. This easy-to-learn, menu-driven, user-friendly, and results-oriented product includes a 3-level data security system, an integrated documentation package, a resource accounting system, easy communication with other systems, and utilities for data base maintenance, reconstruction, and file conversion.

The data base manager permits up to 30 levels and up to 10 keys at any level, each with 10 subkeys; hardware-independent data definition; multiple simultaneous access; and an accessible central dictionary. Two alternative data access methods are provided.

The fourth-generation programming language incorporates 40 verbs for manipulating the data base; controlling terminal output; creating printed reports; managing sequential files; handling dates, alphanumeric information, and arithmetic operations; and communicating with programs in other languages. SISINF provides extensive user facilities for menu generation, screen handling, report generation, data manipulation, and table management. COBOL and FORTRAN subprograms are allowed.

SISINF controls interaction with your computer's operating system, supports both interactive and batch operation, and automatically controls multiple simultaneous access for read or write operations.

A version of this product is available for the PDP–11 computer.

Price: $8000 – $18,500
Contact: John N. Teeter
(512) 465–4010
KRATOS, INC.
702 Colorado, Suite 402
Austin, TX 78701

SL–2000 Integrated Design System™

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Engineering
• Microprocessor development

This system addresses the gate-array or standard-cell design cycle from architectural definition and simulation to chip layout. The programs are written in Pascal and FORTRAN and are available on the VAX–11/700 series of mainframes and on the MicroVAX. Also available are interface programs that allow you to integrate your in-house or industry-standard programs (TEGAS, SPICE, ILOGS, and so on) with the SL–2000 System.

For more information, call (800) 624–9978 or (415) 324–0700. Direct sales offices are located throughout the United States and Europe, with a representative in Japan.

Price: $35,000 +
Contact: E. Barnett or T. Hardy
(415) 853–6343
SILVAR–LISCO
1080 Marsh Road
Menlo Park, CA 94025

Smart/C

Operating System: ULTRIX–32, ULTRIX–32m, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Artificial intelligence • Computer-aided instruction
• Debugging • Programming tools

Memory required: 256K.

This fully integrated, precompilation development environment for the C language allows the user to powerfully and rapidly create, edit, test, and debug C programs before any compilation step. This productivity-enhancing tool, written in C, offers one common environment for both development and maintenance of programs. Smart/C consists of the Environment, which provides syntax-directed editing and interpretation of C source, and the Migrator, which allows existing programs and programs that are created outside the Environment to take advantage of the Environment's power. The Migrator takes any C language ASCII file and translates it into a form that the Environment

can use to both edit and interpret. In addition, testing can be done on a module-by-module basis, allowing modifications to be tested without having to link and load the entire system.

In Europe, this product is distributed by AGS Computers, Inc., Asphalte House, Palace Street, London SW1E 5HS, England 011–44–1–828–4377.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $2695 – $9995

Contact: Gavin Villapiano
(201) 654–4321 or 1–800–247–1313
AGS COMPUTERS, INC.
1139 Spruce Drive
Mountainside, NJ 07092

Smartstar

Operating System: VMS

Keywords: • Application development • File management • Forms management • Information management

Smartstar enables users to set up a working application with screen form, data file, and videoactive operation without writing any code. A powerful set of call routines allows programmers to access Smartstar's features from any VAX programming language. Smartstar allows applications to be completed quickly. Smartstar applications range from the individual office to the entire corporation. Smartstar improves applications such as inventory control, Rolodex, order entry, purchasing, appointment calendar, sales/marketing, scheduling, and list processing.

Price: $2500 – $4200

Contact: Software Sales
(805) 683–3771
SIGNAL TECHNOLOGY, INC.
5951 Encina Road
Goleta, CA 93117

SMP (Symbolic Manipulation Program)

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS

Keywords: • Mathematics • Numerical analysis • Software utilities • Statistics

This symbolic manipulation and mathematical package is a general tool for mathematical problem solving. A second-generation computer algebraic program, SMP can be manipulated by the engineer/scientist/technical professional to automatically perform algebra, calculus, and higher mathematics in symbolic form, allowing computerized control of the solution process. This tool interactively performs the setup of a model or system of equations, algebraic manipulations or other transformation of components, exact solutions of equations or

construction of a user-specified approximation scheme, numerical and graphical evaluation, and generation of C code for further numerical applications.

SMP can perform basic operations of algebra, calculus, matrix, and tensor manipulation in mathematical notation. Numerical evaluation routines are available for most functions of physics and engineering. Mathematical expressions can be displayed in either 2-D or 3-D graphics for pictorial representation and analysis.

SMP is also a high-level mathematical program language whose facilities provide an arbitrary transformation of symbolic forms, allowing the user to customize or teach the system a specific application or any math not built into the program. A large library of programs in this language includes exact solutions of differential equations, univariate statistics and controller applications, and trigonometric identities.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $6750 +
Contact: Terry White
(213) 417–7997
INFERENCE CORP.
5300 West Century Boulevard, Fifth Floor
Los Angeles, CA 90045

SNDRCV (Send/Receive File Utility)

Operating System: Independent
Keywords: • Disk utilities • File transfer
• Microprocessor development

SNDRCV, available in source and object formats, transfers ASCII or binary data files with a specified record size between machines. Sumchecking and handshaking functions can be performed at both the sender's end and the receiver's end. The SNDRCV utilities at each end of the transfer monitor the progress and integrity of each transmission and try again if necessary.

SNDRCV can receive many files unattended. The send command specifies the destination file name, including path (in terms of the destination operating system). The record count and checksum of each file are computed and printed at both sides as a final check on integrity. The program handles byte-swapping differences between VAX and 68000 and is ideal for reliable transmission of program images and so on. The baud rate can be set from the command line. Target memory address may be specified.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

SofForms

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Data collection • Data entry
• Forms management • Programming tools

SofForms, a forms creation package, provides data entry forms in front of any application, with help and validation associated with every data entry field. The form painter program allows the designer to paint the form on the screen and to associate help text and validation criteria with each field. The run-time portion will display the form for the end user, collect and validate data, and respond to help requests.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $250 – $1000
Contact: David Schneider
(201) 447–3901
SOFTEST
555 Goffle Road
Ridgewood, NJ 07450

SOFTOOL 80®

Operating System: VMS
Keywords: • Documentation • File management
• Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This comprehensive set of tools for software management, development, and maintenance contains 12 packages:

- Tutorial Library™ includes three levels of software product information, allowing the user to select the degree of detail.
- Tracing Instrumenters™ documents the path of the program control flow from module to module.
- Testing Instrumenters™ generates module and statement-level execute-time program reports. Those profiles detail test coverage and effectiveness.
- Optimization Instrumenters™ generates module and statement-level execute-time program reports as well. Those profiles show absolute and relative execution times for modules, subsystems, and statements, and more.

- Interface Documenter™ accepts as input a collection of object modules and generates information indicating all interfaces between the object modules.
- Documenter A™ facilitates the methodical, uniform documentation of source program units.
- Structurizer™ allows the user to augment FORTRAN with defined control structures for the generation of custom-mode preprocessors.
- Library of Preprocessors™ is a key to the implementation of an effective structured language facility.
- Productivity Library™ contains routines for manipulating high-level data structures for a wide range of application programs.
- Memory Managers Library™ allocates to a program only the amount of memory space needed for a given execution.
- Auditor 66™ and Auditor 77™ audit FORTRAN programs for deviations from ANSI definitions of the FORTRAN–66 and FORTRAN–77 languages, respectively.

DIGITAL distributes this software product under license from Softool Corporation.

Refer to SPD #A0.26.xx when requesting further information on this product from your local DIGITAL sales office.

Softool 80® is a registered trademark of Softool Corporation. Tutorial Library,™ Tracing Instrumenters,™ Testing Instrumenters,™ Optimization Instrumenters,™ Interface Documenter,™ Documenter A,™ Structurizer,™ Library of Preprocessors,™ Productivity Library,™ Memory Managers Library,™ and Auditor 66™ are trademarks of Softool Corporation.

Price: $3500 – $60,000
Contact: Consult your local DIGITAL sales office (see Introduction).

SOFTOOL®

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools • Project management • Source code control

Distribution medium: magnetic tape.

This comprehensive environment for software management, development, and maintenance consists of an integrated collection of software tools hosted on a conventional computer system to create a software development and control facility. SOFTOOL supports an explicit distinction between the host environment, where software is developed and controlled, and the target environment, where programs are executed.

SOFTOOL aids both the manager and the software specialist. The manager can set, facilitate, and enforce standards and obtain visibility and control over software efforts. At the same time, the software builder can concentrate effectively on the software-construction process.

The tools available include shorthand and structured languages, a source code auditor, a source code documenter, an interface documenter, error detectors, libraries of prefabricated code, testing and tracing aids, optimizers, dynamic memory managers, flow analyzers, tutorials, and change and configuration control.

SOFTOOL is available off the shelf for a growing number of computer systems.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

SOFTOOL® COBOL Programming Environment

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools
• Project management

Distribution medium: magnetic tape.

This comprehensive set of integrated tools for software management, development, and maintenance can be hosted on a conventional computer system to create a software development and control facility. The COBOL Programming Environment supports an explicit distinction between the host environment, where software is developed and controlled, and the target environment, where programs are executed.

This set of tools aids both the manager and the software specialist. The manager can set, facilitate, and enforce standards and obtain visibility and control over software efforts. At the same time, the software builder can concentrate effectively on the software-construction process.

The tools include shorthand and structured languages, a source code documenter, an interface documenter, error detectors, testing and tracing aids, optimizers, and tutorials.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

SOFTOOL® FORTRAN Programming Environment

Operating System: ULTRIX–32, VMS
Keywords: • Debugging • Programming tools

Distribution medium: magnetic tape.

This comprehensive set of integrated tools for software management, development, and maintenance can be hosted on a conventional computer system to create a software development and control facility. The SOFTOOL FORTRAN Programming Environment supports an explicit distinction between the host environment, where software is developed and controlled, and the target environment, where programs are executed.

SOFTOOL aids both the manager and the software specialist. The manager can set, facilitate, and enforce standards and obtain visibility and control over software efforts. At the same time, the software builder can concentrate effectively on the software-construction process.

The tools available include shorthand and structured languages, a source code auditor, a source code documenter, an interface documenter, error detectors, libraries of prefabricated code, testing and tracing aids, optimizers, dynamic-memory managers, flow analyzers, and tutorials.

Price: Available upon request
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

SOFTOOL® Tutorials Library

Operating System: ULTRIX–32, VMS
Keywords: • Computer-aided instruction • Education • Programming tools • Project management

Distribution medium: magnetic tape.

This comprehensive collection of interactive tutorials in support of the SOFTOOL methodology and tools is easy to use. The tutorials are organized in a hierarchical fashion that allows the user to select the degree of detail to be covered. The top level provides a management overview. The second level offers a programming overview. The third level consists of a detailed tutorial for each SOFTOOL component.

SOFTOOL is a methodology and an integrated environment for software management, development, and maintenance. The interactive tutorials, containing more than 25 hours of instructional material, allow for the rapid and thorough training of personnel.

Price: $3500
Contact: Sales Department
(805) 964–0560
SOFTOOL CORP.
340 S. Kellogg Avenue
Goleta, CA 93117

Software Toolkit/ctext

Operating System: VMS

Keywords: • Device drivers/handlers • File management • Programming tools • Text management

Software Toolkit is a sophisticated set of tools designed from the ground up for use with one another, with standard conventions for specifying the components of a command line and for naming flags, regular expressions, sort keys, and other parameters. The complete toolkit can be transported to numerous host operating systems, because each tool has been designed and written to be portable. These tools are excellent for enriching your current operating system environment.

The ctext is a user-programmable system for creating formatted text suitable for reproduction by a variety of output devices. Supported devices include miscellaneous terminals or printers, VT52 or VT100 display terminals, Diablo printers, and the Varityper 5410/5810/5900 family of phototypesetters.

The style of markup, or commands, to be recognized by ctext is programmable, so that it can directly interpret nroff/troff "line-style" macros in addition to customized formats. In other words, manuscripts using any of the common nroff/troff macro sets can be easily formatted.

A version of this product is available for the PDP–11 computer.

Price: $200

Contact: Christina B. Hanley
(617) 369–8499
WHITESMITHS, LTD.
97 Lowell Road
Millbrook Tarry
Concord, MA 01742

SOLUTIONS DECk Design

Operating System: VMS

Keywords: • Data base management • Pre- and postprocessors • Query facilities

SOLUTIONS DECk Design provides the system designer with a simple and quick methodology to lay out files and to define menus, screens, master and transaction processing, and report-inquiry programs. The interactive process runs from the user's terminal and is driven by the user's replies to simple English prompts. No in-depth knowledge of programming or data storage mechanics is required.

SOLUTIONS DECk Design is menu driven and uses self-explanatory prompts to guide the user with defaults and display of available answers when appropriate. The system contains modules to handle each requirement normally found in on-line, menu-driven commercial data processing applications.

SOLUTIONS DECk Design includes modules for both designing and documenting. SOLUTIONS DECk Design produces full documentation of all files, screens, and report layouts. In addition, program narrative and program outlines detailed to the code section level are produced. The program outlines include necessary code for standard routines and section headers indicating location and detail of additional code required as indicated by the design effort.

All products are created as ASCII disk files and are available for printing, editing, and so on.

A version of this product is available for the PDP–11 computer.

Price: $795
Contact: W. R. Hallam
(506) 455–1008
SOLUTIONS DECK
P.O. Box 684, Station A
Fredericton, NB E3B 5B4
Canada

SOLUTIONS DECk DMS

Operating System: VMS
Keywords: • Data base management • Pre- and postprocessors

This family of preprocessors greatly speed the creation of programs normally found in an interactive commercial data processing system. These low-cost tools should provide at least a 100% productivity improvement, even in casual use, over traditional methods. The preprocessors' objective is to quickly and accurately produce 90% to 95% of the code required for each type of program — free of errors and bugs.

All SOLUTIONS DECk preprocessors are driven by the user's replies to an interactive dialog conducted from a terminal. From the user's replies, a program is tailored for the specific situations, including "painting" screen and report layouts.

The family includes the following program-type preprocessors:

- Dictionary — Produces a complete dictionary file from user replies to simple questions, provides recommended system defaults, and uses channel assignment to ensure unique line numbers.
- Master — Meets most master file program requirements, including logic to support additions, changes, deletions, and inquiry; and creates code required for file and screen handling, beginning and end of job, and error handling.
- Transaction — Produces most of the code required for most transaction programs; supports up to 12 files; creates code required for file and screen handling, matching, breaks, secondary file(s) handling, error codes, and beginning and end of job routines; and supports user-directed special handling.

- Report — Meets most report program requirements; supports up to three files in one report; and creates code required for file and report handling, run totals, matching, breaks, error handling, and beginning and end of job routines.
- Inquiry — Meets most inquiry programs requirements; supports up to three files in one inquiry; and creates code required for file and screen handling, matching, breaks, totals, error handling, and beginning and end of job routines.
- Merge-extract and reformat — Completely or selectively selects, merges, and/or reformats existing files into one or more additional or changed files.

In all cases, SOLUTIONS DECk produces documentation of all screen and report layouts as well as program narratives.

A version of this product is available for the PDP–11 computer.

Price: $250 – $1495
Contact: W. R. Hallam
(506) 455–1008
SOLUTIONS DECK
P.O. Box 684, Station A
Fredericton, NB E3B 5B4
Canada

SOLUTIONS DECk Extract

Operating System: VMS
Keywords: • Data base management • Pre- and postprocessors

SOLUTIONS DECk Extract-Merge-Reformat Preprocessor is designed to interactively produce more than 95% of the code required for most extract-merge-reformat program requirements in a matter of minutes. The preprocessor should provide a 100% productivity improvement, even in casual use.

SOLUTIONS Extract-Merge-Reformat is driven by the user's replies to an on-line interactive dialog. The user specifies up to three files for inclusion and indicates their relationships. The user is then guided for optional inclusions. SOLUTIONS Extract-Merge-Reformat then produces the program.

SOLUTIONS Extract-Merge-Reformat is one of a family of SOLUTIONS DECk preprocessors designed to support all program types found in an on-line commercial environment.

A version of this product is available for the PDP–11 computer.

Price: $495 – $595
Contact: W. R. Hallam
(506) 455–1008
SOLUTIONS DECK
P.O. Box 684, Station A
Fredericton, NB E3B 5B4
Canada

SOLUTIONS DECk Master

Operating System: VMS
Keywords: • Data base management • Graphics
• Pre- and postprocessors

SOLUTIONS DECk Master preprocessor is designed to interactively produce more than 95% of the code required for most of the master file programs in a matter of minutes. Use of the preprocessor should provide a 100% productivity improvement, even in casual use.

SOLUTIONS Master is driven by the user's replies to an on-line interactive dialog. The master file description is specified for inclusion. The user is then guided through screen layout — headings, prompts and replies — to quickly and easily "paint" the desired screen for master file maintenance, including edit for data type and lengths. The user can indicate any special data handling required for each data item. SOLUTIONS Master prepares section headers indicating required code and includes them in the program being produced. The output program is then completed by the addition of the user's (optional) own code.

SOLUTIONS Master uses any file description. The program created includes all code for file and screen handling. Logic to support master file additions, changes, deletions, and inquiries is included. Also included are beginning of job, end of job, and error routines.

The user can add code for data input/output and any special handling to complete the program.

A version of this product is available for the PDP–11 computer.

Price: $495 – $695
Contact: W. R. Hallam
(506) 455–1008
SOLUTIONS DECK
P.O. Box 684, Station A
Fredericton, NB E3B 5B4
Canada

SOLUTIONS DECk Report Writer

Operating System: VMS
Keywords: • Data base management • Report writer

The SOLUTIONS DECk Report Writer preprocessor is designed to interactively produce more than 95% of the code required for most of the report program requirements in a matter of minutes.

SOLUTIONS Report is driven by the user's replies to an interactive dialog from a terminal of almost any type. The user specifies up to three files for inclusion and indicates their relationships. The user is then guided to heading and report layout(s). SOLUTIONS Report then produces the program ready for inclusions of the user's (optional) own

code. The program created includes all code for file and report handling, run totals, matching, breaks, and beginning and end of job routines. The output report can be sent to any system printer.

SOLUTIONS DECk Report is one of a family of SOLUTIONS DECk preprocessors designed to support all program types found in an on-line commercial environment and should provide 100% productivity improvement, even in casual use.

A version of this product is available for the PDP–11 computer.

Price: $595

Contact: W. R. Hallam
(506) 455–1008
SOLUTIONS DECK
P.O. Box 684, Station A
Fredericton, NB E3B 5B4
Canada

SOLUTIONS DECk Transaction

Operating System: VMS

Keywords:
- Data base management
- Graphics
- Pre- and postprocessors
- Query facilities

This program processor is designed to interactively produce more than 90% of the code required for most transaction processing program requirements in a matter of minutes. Use of the SOLUTIONS Transaction should provide a 100% productivity improvement, even in casual use.

SOLUTIONS Transaction is driven by the user's replies to an on-line interactive dialog. The user specifies up to 12 files for inclusion and is then guided through screen layout, including heading, input prompts, and replies. Logic for the editing of input data type and lengths is also included. The user can indicate any special data handling required for each data item. SOLUTIONS Transaction prepares section headers indicating required code and includes them in the program being produced. The output program is then completed by the addition of the user's (optional) own code.

A version of this product is available for the PDP–11 computer.

Price: $795

Contact: W. R. Hallam
(506) 455–1008
SOLUTIONS DECK
P.O. Box 684, Station A
Fredericton, NB E3B 5B4
Canada

Source Manager and DCL Command Parsing Routines

Operating System: VMS
Keywords: • Application development • Compilers
• Software utilities

Memory required: 36KB.

The MAKE command behaves like LINK but compiles the programs in the command line if their sources are dated later than their objects. MAKE then links with the files specified in the command line. If the files are up to date, MAKE will do nothing.

MAKE can submit a batch job or compile interactively in either MACRO or FORTRAN, depending on the type of source file. MAKE calls DCL command line parsing routines for getting strings, numbers, file names, and qualifiers from the foreign command line. DECUS number VAX–103.

Price: $5 – $225
Contact: DECUS (see Introduction)

SourceTools™

Operating System: VMS
Keywords: • File management • Programming tools
• Software utilities • Source code control

This language-independent tool increases individual and programmer productivity by keeping track of details. SourceTools includes a source control system, a file rebuilder, a file comparator, and a stream editor to effectively manage and maintain all stages of the software development life cycle.

A version of this product is available for the PDP–11 computer.

Price: $2600 – $7500
Contact: Sales Department
(503) 245–2202
OREGON SOFTWARE
6915 S.W. Macadam Avenue
Portland, OR 97219

SPREADS

Operating System: VMS
Keywords: • Data base management • Data conversion
• Query facilities

This system provides all the facilities required of a functionally complete DBMS. SPREADS offers easy-to-use language interfaces to define and create data bases, relations, and secondary indexes. In addition, single relation level, qualified security, and integrity constraints can be defined. R–QUEL, the relational query language of SPREADS, facilitates multirelation querying with aggregations and computations. R–QUEL queries can be embedded in FORTRAN–77 and

COBOL programs and feature data exchange between host language statements and R–QUEL commands. A report-generator package with standard features is available for both sequential data files and the SPREADS data base. SPREADS utilities provide recovery, archival, and data base design (third normal form) facilities. All code is fully reentrant and supports multiuser facilities.

Price: $20,000 +

Contact: Corporate Marketing Manager
Telex: 0155–625
COMPUTER MAINTENANCE CORP. LTD.
The Arcade, World Trade Centre
Cuffe Parade, Bombay 400 005
India

STM (Storage Manager)

Operating System: ULTRIX–32, VMS

Keywords: • Disk utilities • Programming tools

STM allows systems to be written without regard to memory demands for physical space. STM gets the right piece of memory to the right location at the right time. STM is initially allocated one large block of memory. Callers of STM are allocated variable-length pieces of that memory, the sum of which may be many times larger than STM's original allocation. STM controls the movement of logical blocks of user data to and from the system disk. The STM is typically used to manage data, not programs (as in the case of program overlays). STM is used as the underlying storage allocation mechanism in the Symbol Manager (SYM).

STM works on VM or normal system without reprogramming. STM can allocate any sized continuous block of memory, refer to blocks through block numbers that are converted to real addresses, allow a block to be grown or shrunk, switch blocks to disk, refer blocks to memory, lock blocks to memory, align all blocks on machine word size, designate blocks to read-only to optimize disk access, recover freed memory, and collect switchable statistics for analysis of STM use.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

STRIP

Operating System: VMS

Keywords: • Compilers • Disk utilities • Programming tools • Source code control

Distribution medium: magnetic tape.

STRIP is a VAX–11 COBOL program that reads in other VAX–11 COBOL programs and removes nonsignificant digits to the right of each source code statement, including columns 73 to 80. The user is prompted to select both input and output file names. DECUS number VAX–55.

Restrictions: The program modifies COBOL source code. The source code must have line numbers in column 1 through 6.

Price: $5 – $225
Contact: DECUS (see Introduction)

SUBS (Standard Subroutine Library), Version II

Operating System: VMS
Keywords: • Assemblers • Programming tools
• Source code control

Distribution medium: magnetic tape.

This set of assembler and BASIC routines performs common programming functions and features cursor positioning, clearing all or parts of the screen, displaying a message at a screen location, accepting and editing a user response, displaying user error prompts and waiting for a response, ASCII–to-EBCDIC conversion, and packing and unpacking data fields. Also included are routines that perform terminal recognition tests and issue the proper cursor control sequences for DIGITAL, Televideo, Hazeltine, and ADM terminals.

User manuals can be purchased to preview the functioning of the product. A user instruction/installation guide is included.

Limited support, as defined in the Software Maintenance Agreement, is provided for SUBS for 60 days. Additional coverage is available.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: Neal J. Anderson, Senior Product Specialist
(414) 784–8250
MCHUGH, FREEMAN AND ASSOCIATES, INC.
1135 Legion Drive, P.O. Box 454
Elm Grove, WI 53122

SUPERDBG

Operating System: ULTRIX–32, UNIX* (System III), VMS
Keywords: • Communications • Debugging
• Microprocessor development

SUPERDBG is a family of software debuggers or emulators that support microprocessor program development. Two SUPERDBG debugger versions are available for each of the commonly used microprocessors. The simplest and least expensive version, LEVEL 0, is a binary debugger similar to ODT in its operation. LEVEL 1 debuggers also enable users to reference addresses and op codes symbolically.

SUPERDBG debuggers use the outputs of the corresponding SUPERMAX cross-assembler/linker packages to produce a load module, which is then read into SUPERDBG debugger, using the LOAD command. The user can then perform a number of operations on the load module, including emulated execution. Other features include breakpoints, single- or multiple-step execution, and the ability to examine and/or modify individual registers, condition codes, and memory locations.

SUPERDBG debuggers can also communicate directly with the host system, reading and writing to the system device and accessing the console keyboard and screen. Those and other features are provided to allow the user to access the external devices outside of the emulated microprocessor.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $500 – $1000

Contact: Mark P. White, Vice President, Marketing
(617) 938–0709
CYMRIC COMPUTER SYSTEMS, INC.
10 G Roessler Road
Woburn, MA 01801

SYM (Symbol Manager)

Operating System: ULTRIX–32, VMS

Keywords: • Programming tools

This general-purpose system for performing common operations related to managing a collection of symbols permits the caller to store its information in a symbol table entry. The symbol table is managed through the Storage Manager (STM). The SYM package provides sufficient flexibility and performance to meet the needs of most situations. SYM is ideally suited for interpreters, assemblers, and compilers.

Symbols are user-defined structures that may contain a name of any length. Different symbols have different structures. A symbol may be a "leaf" or a symbol table. Various functions manage those symbols. Class codes distinguish among classes of symbols; functions insert, look up, rename, and delete symbols; look up a substring of a symbol name, using a hash algorithm; and find the first or next symbol in a symbol table.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

TAE (Transportable Applications Executive)

Operating System: VMS
Keywords: • Programming tools

Distribution medium: 9-track 1600 bpi magnetic tape.

This collection of executive programs standardizes the user interface to applications programs. The user of an applications program running under TAE does not need to know the command language of the host computer; TAE manages the entire interactive session, providing a user-friendly environment.

TAE operates in three modes. In the menu mode, the user proceeds through a session by selecting from a list of options. In the command mode, the user can communicate with TAE through a simple command language. In the tutor mode, the user can establish and review sets of parameters to be supplied to an applications program. Each mode provides an extensive help facility. A library of TAE utility subroutines is available to standardize access to primitive host functions and to enhance the portability of the calling program. TAE helps the programmer develop help text files and menus.

This prototype version of TAE is written in RATFOR, VAX FORTRAN, and MACRO ASSEMBLER and has been implemented on a VAX–11/780 operating under VMS. A specialized RATFOR-to-FORTRAN translator is included with the TAE system. The TAE program product is available by lease for 10 years. The leased program product includes the TAE source, object, and executable codes, sample applications, and one set of supporting documentation.

Price: $2000
Contact: Ruthann Jones
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30605

TDMS (Terminal Data Management System)

Operating System: MicroVMS, VMS
Keywords: • Forms management • Information management • Programming tools • VAX Information Architecture

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RC25, RK07, RL02.

VAX TDMS is a set of software tools designed to reduce the life-cycle costs of developing and maintaining interactive computer applications in which terminal keyboards and screens are used extensively to enter and display data. VAX TDMS is a programmer productivity tool for screen-based applications and a fourth-generation-like record-level interface for defining screen/program data exchange. VAX TDMS couples the 4GL record-level interface to 3GL applications, relieves application programs of terminal I/O–specific code, provides a terminal subsystem for ACMS, and provides forms-management capabilities to DATATRIEVE users. Run-time access is provided for the MicroVAX I and the VAXstation I; run-time and development capabilities are available for the MicroVAX II and the VAXstation II.

VAX TDMS applications range from data base inquiry/response/update to real-time uses such as the periodic display of an industrial process. VAX TDMS is typically used as a terminal subsystem in terminal data management applications such as inventory control, manufacturing, distribution, and other forms-intensive applications. As a terminal subsystem, VAX TDMS can reduce the application development and maintenance effort by replacing application program logic, specific to terminal interaction, with definitions that are external to the program.

TDMS is integrated with the VAX Information Architecture, in which definitions of data, screen formats, and program and terminal data exchanges are treated as commonly shared resources, thus greatly reducing the development and maintenance costs of individual applications. For applications using the same data and definitions, much redundant programming effort is eliminated.

Refer to SPD #26.94.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $275 – $4125

Contact: Consult your local DIGITAL sales office (see Introduction).

TESTWARE

Operating System: Independent, MicroVMS, ULTRIX–32, ULTRIX–32m, VMS

Keywords: • Programming tools • Quality control

TESTWARE, an application-independent fully automated programming tool for testing software, greatly reduces the expense of developing and maintaining software over the total system life cycle. TESTWARE ensures that programs under development run correctly and that programs modified after development continue to run correctly. The tool maintains a permanent record of test data, test conditions, and test results and permits testing of system functions, which may be comprised of any number of modules. TESTWARE augments the software quality assurance function, is an integral part of the configuration management function, and is available on PDP, VAX, IBM PC, and 68000-based systems for Pascal and C programs.

A version of this product is available for the PDP–11 computer.

Price: $500 – $9800

Contact: Don Waterman
(613) 820–7235
PRIOR DATA SCIENCES LTD.
Bell Mews Plaza, 39 Highway 7, Suite 232
Ottawa, Ontario K2H 8R2
Canada

TIDY

Operating System: VMS

Keywords: • Compilers • Programming tools
• Source code control

Distribution medium: magnetic tape.

This program to clean up structured COBOL programs reads an ANSI format structured COBOL source file (paragraph = module, PERFORMs only, no GOTOs) and produces a source file in which each paragraph name has been given a numerical prefix reflecting the paragraph's position in the PERFORM hierarchy. Comment lines added at the end of each paragraph list the names of all other paragraphs that refer to it. Any existing numerical prefixes are replaced by new ones, as are any comment lines previously generated by TIDY.

The prefixes vary in length, depending on how far down the paragraphs are in the PERFORM hierarchy, and the paragraphs are rearranged in the order of the paragraph names. The net effect is that the program can be read as if it were a technical monograph, with numbered paragraphs, subparagraphs, subsubparagraphs, and so on, each with footnotes and cross-references in place.

TIDY's own source code, 2000 lines, is an example of TIDY's output. TIDY is portable and handles up to 200 paragraphs and up to 800 PERFORMs; those limits are easily changed. DECUS number VAX–54.

Restrictions: If a program contains "GOTO" statements, TIDY will not restructure. Do not use on any source containing GOTOs.

Price: $5 – $225

Contact: DECUS (see Introduction)

TMX32 (Transaction Management Executive)

Operating System: VMS

Keywords: • Programming tools • Real time
• Telecommunications

Memory required: 2MB.

The transaction management executive provides CICS-like capabilities with FMS or 3270-type screens. Disk caching, transaction journaling, and commitment of rollback features are provided. A message control system stores and forwards queueing applications. TMX32 provides transparent communication between processes within an application or across applications, even on different CPUs. Multiline print spooler and utility tools are included. TMX32 is written in MACRO and BLISS.

Price: $40,000
Contact: Arthur Cacossa
(212) 425–0200
PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

The Toolbox

Operating System: ULTRIX–32, UNIX* (Berkeley, System III), VMS
Keywords: • Programming tools • Source code control
Distribution medium: RX01.

This collection of programmer's utilities is available in source form only and is written for the Whitesmiths' C compiler. Included are cross-reference and source listing programs with #include and #line processing. Line numbers match the Whitesmiths' error listings. "Sort" is a simple alphabetic sort. The sort function is "plug-compatible" with Whitesmiths' sort but is not stack intensive. "Col" prints multiple columns on a page. "Print" paginates listings with margins at the top and bottom of a page. "Crt" scrolls forward through a text file, one CRT screen at a time. The Toolbox Plus adds programs to read CP/M and UCSD p-System™ SSSD 8″ floppies. These two programs run only on systems that open the whole floppy as a file (they will not work on CP/M).

* UNIX is a trademark of AT&T Bell Laboratories. UCSD p-System™ is a trademark of University of California Regents.

A version of this product is available for the PDP–11 computer.

Price: $60 – $80
Contact: Jeffrey Taylor
(916) 753–5040
THE TOOLSMITH
139 G Street M/S 151
Davis, CA 95616

TPU (Time Profiler Utility)

Operating System: Independent
Keywords: • Debugging • Disk utilities • Language processors • Programming tools

TPU allows the designer or engineer to study the dynamics of a running C module or system. TPU can be used as a debugging tool or as a tool for studying where critical time is being spent.

TPU allows the user to customize the generated reports. If a TPU built-in system limit is exceeded (for example, depth of nesting), the user can modify the appropriate parameter to accommodate the situation without affecting normal operation of the utility.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

Tracer C Debugger

Operating System: VMS
Keywords: • Debugging • Programming tools

This tool simplifies the debugging of C programs when the program compiles correctly, but the cause of incorrect results or execution errors is not immediately apparent. Tracer runs in two modes, each producing valuable output for programmers and managers to analyze C code quickly. Source analysis mode shows questionable, nonportable, or wasteful code segments; variable type-usage conflicts; and unused variables and functions. The run-time analysis mode shows the programmer the names and new values of variables when they are changed; the names and values of functions and arguments upon entry as well as the name of the caller; labels of statements when they are executed; and execution of if/else, while, do, and case statements.

The amount of diagnostic information produced by Tracer is determined by the options specified by command line switches and in a #trace statement in the source program. Information may vary from a short trace of one variable for a span of only a few statements to a full trace of a complete program. Output can be sent to any file or device.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Sales Department
(415) 494–7500
IPT CORP.
1096 East Meadow Circle
Palo Alto, CA 94303

Troll/USE

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Data base management • Information management • Language processors • Programming tools

This compact relational data base kernel provides an algebraic (procedural) interface to relational data bases. At the relation level, the operations include selection, projection, join, and product. At the tuple level, the operations include cursor manipulation with tuple-at-a-time processing, including an if-then-else. At the item level, the operations include assignment and associative access. Troll/USE supports data type checking, including scalars and variable-length strings.

The system works with a set of related tools, including the C-to-Troll and F77-to-Troll libraries, which allow easy interface to Troll/USE by means of message passing from C and FORTRAN–77 programs. Other tools related to Troll/USE are a screen-oriented relation browser and editor, a report generator (TRG), and a high-level programming language (PLAIN). Troll/USE can also be easily used with RAPID/USE to quickly build interactive information systems.

The Troll/USE environment is built as a collection of independent tools, following the UNIX* philosophy, rather than as a single monolithic system. Troll/USE is independent of application areas and industries.

Troll/USE is part of the User Software Engineering distribution tool set. Commercial support and training are provided.

An unsupported distribution is available from User Software Engineering Distribution, University of California, San Francisco, Medical Information Science, Room A–16, San Francisco, CA 94143.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $6000
Contact: Anthony I. Wasserman
(415) 666–2951
INTERACTIVE DEVELOPMENT ENVIRONMENTS, INC.
44 Monterey Boulevard, Suite 32
San Francisco, CA 94131

UMDL (Universal Microprocessor Development Laboratory)

Operating System: VMS
Keywords: • Debugging • Microprocessor development • Programming tools

This tool defines the personality of a microprocessor in software and is used with Compu-Mech's CD1000 Microprocessor Development Instrument. UMDL performs 8/16-bit universal emulation, input stimulus generation, 48-channel bus-state analyzing, and EPROM/EEPROM programming from a VAX or a PDP–11.

The bus-state analyzer function can debug any microprocessor; thus, the target processor need not be emulated. Optional transparent software for debug and disassembly is available for traditional in-circuit emulation functions, such as breakpoints, RAM changes, and so forth. More than 30 microprocessors are fully supported.

The development instrument uses a standard RS232 interface with the host VAX or PDP–11 and uses a ROM socket interface for the target systems.

A version of this product is available for the PDP–11 computer.

Price: $1200 – $1600
Contact: Gary Ruff
(419) 535–6702
COMPU–MECH, INC.
5242 Angola Road, Suite 75
Toledo, OH 43615

UNIFY Relational Data Base Management System

Operating System: ULTRIX–32, ULTRIX–32m
Keywords: • Application development • Data base management

This multiuser, menu-driven, and fully interactive UNIX* relational data base management system supports up to two billion records over eight physical devices. UNIFY provides a complete range of application development tools, including a menu handler, automatic data entry, query by forms, a report generator, and a structured query language (SQL) based on IBM's SEQUEL 2 relational query language. A host language interface, compatible with C and RM/COBOL, is also provided.

UNIFY offers multiple data access and raw file I/O capability for fast performance while requiring a minimum memory configuration of only 384K bytes and four megabytes of disk space.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1495 – $14,500
Contact: Dean Westbrook
(503) 635–6265
UNIFY CORP.
4000 Kruse Way Place, Building 2, Suite 255
Lake Oswego, OR 97034

UniGen — Office Automation System

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Menu handlers • Office systems
• Programming tools

This system includes programs for building menus and generating prompts to user specifications. Separate run-time modules are available for installation at a customer site. Menu options may call other menus, run programs, or run prompts. Prompts ask the user for arguments to execute UNIX* and other programs, then execute the programs. Prompts shipped with UniComp can be changed, or the installer can generate custom prompts to user specifications. Custom menus may be created using any editor or word processor that creates standard UNIX* text files. End users need not know about UNIX* to use UNIX* with UniComp. This system includes UniRite word processing interface to vi (for select CRTs). Optionally, UniComp may be shipped with complete office automation system menus already set up and ready to run. Raw menus are also included and can be tailored to meet any user requirement for which UNIX* is an appropriate solution.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $7000
Contact: Steve Turpin
(417) 883–6800
UNICOMP CORP.
1736 E. Sunshine, Suite 202
Springfield, MO 65804

UniPress EMACS™ — Gosling Version

Operating System: MicroVMS, ULTRIX–32, VMS
Keywords: • Debugging • Programming tools
• Text management

This multiwindow, full-screen editor includes extensive cursor navigation and powerful text manipulation. Multiple windows permit several files or portions of one file to be edited simultaneously. Any shell program can be executed from an EMACS window. Command output can be routed to an EMACS window. Execution of commands is supported through DCL windows. EMACS is user extensible. Users can create macros and write commands through the built-in compiled MLISP programming language. Commands can be mapped to the desired keys on the terminal. C, Pascal, and MLISP programming aids and a built-in data base system are used for extensive help facilities.

EMACS is written in C and was originally written for the UNIX* operating system.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $995 – $7000
Contact: Joyce Bielen
(201) 985–8000
UNIPRESS SOFTWARE, INC.
2025 Lincoln Highway
Edison, NJ 08817

UniWare 6502/Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development
• Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 6800 Cross-Devolopment Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development
• Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
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- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 6801/6301 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.

- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 6805/6305 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 6809 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 8041/8042 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.

- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 8048/8049 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: Uniware Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 8051 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)

Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request

Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare 8080/8085 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)

Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare Fairchild F8/3870 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.

- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare RCA 1802 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Cross-compilers • Microprocessor development

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare TMS7000 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare Z8 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.

- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UniWare Z80 Cross-Development Tools

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Assemblers • Microprocessor development • Software utilities

The UniWare product includes the following:

- Assembler — Features manufacturer compatibility, versatile listing control, and full symbol table and cross-reference listings. Code and data areas can easily be partitioned into many "regions" to fit your hardware configuration. The powerful preprocessor allows for replacement of text, conditional assembly, and macro expansion.
- Link editor — Supports an unlimited number of symbols in a load, has full multiple-overlay capabilities, and is extremely fast. The link editor permits arbitrary-length symbol names and allows complete control over placement of regions. Intermediate links and an archive librarian are provided for support of large projects.
- Communication programs — Utilities to handle down-line loading to virtually all emulators, PROM programmers, and target hardware. Symbolic information can also be down-line loaded to emulators that support symbolic debugging.
- Debugging aids.
- Service and technical support.

An on-line demonstration is available. Assemblers are available for Hitachi, Intel, Mostek, Motorola, RCA, Rockwell, Texas Instruments, and Zilog microprocessors.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: UniWare Sales
(312) 971–8170
SOFTWARE DEVELOPMENT SYSTEMS, INC.
3110 Woodcreek Drive
Downers Grove, IL 60515

UNIX* Utility Pack

Operating System: ULTRIX–32
Keywords: • Programming tools • Software utilities

This package contains utility programs that are helpful to UNIX* users. Each program is accompanied by a manual page and/or a user document. The utility programs are:

- Eh? (Extra Help) is an interactive help file system that provides a simpler interface than the UNIX* "man" command.
- Check checks files for characters that are not normally included in text files and simplifies locating unwanted characters in files.
- Env prints the names and values of the current environment variables.
- Fd displays directory contents in columns across the screen. Directory files are highlighted to distinguish them from other files. An option allows complete file details to be displayed.
- Fed is a binary file editor that allows binary files to be displayed and edited in a full-screen mode.
- Fret retrieves file contents by i-node number and may help salvage files after a system crash.
- Inform adds or deletes tabs from files, strips trailing blanks, and deals with overstrikes on CRT terminals in a useful way.
- Net is a hierarchical information management program.
- Obershell provides (last) command recall and editing, command and file name recognition, and aliasing.
- Ptty is a friendly, extended STTY program.
- Rdx, a front end for ed, provides a macro capability and allows you to select a range of lines for screen editing. All ed commands are passed through to ed.
- Whichbin finds a command accessible through the current search PATH and reports its path name.
- Xam examines files and provides facilities for paging up and down through text files and for string searching. Xam accepts a list of files and allows you to go back to previous files for reexamination.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $200
Contact: Douglas Ross
(613) 548–4355
ANDYNE COMPUTING LTD.
P.O. Box 1496, 221 King Street, East
Kingston, Ontario K7L 5C7
Canada

USE.IT

Operating System: VMS
Keywords: • Graphics • Programming tools • Project management • Simulation

This unique set of tools for computer-aided software engineering consists of three components: Axes, Analyzer, and the Resource Allocation Tool (RAT). Axes is an interactive sketchpad to develop graphical system requirements. The Analyzer automatically verifies that those specifications are consistent, complete, and error free. The Resource Allocation Tool generates source code that matches the system definition exactly in COBOL and FORTRAN. That code allows rapid prototyping, simulation, and/or production application. The complete tool provides error-free application generation without programmer intervention.

Price: $92,000
Contact: John Burton
(617) 661–8900
HIGHER ORDER SOFTWARE, INC.
2067 Massachusetts Avenue
Cambridge, MA 02140

USER–11 Database Management System

Operating System: VMS
Keywords: • Application development • Data base management • File management • Programming tools

Memory required: 256K bytes minimum.

This high-performance data base management system and application development tool consists of more than 20 integrated, parameter-driven modules that can be quickly and easily combined and modified. USER–11's powerful file accessing retrieves any disk record in two disk accesses. USER–11 offers security surpassing that of the DIGITAL operating system. User passwords may be encrypted. Users may selectively be locked into application menus, preventing access to system-level resources. USER–11 is for the advanced software designer as well as for the end user. Software designers have program generators that can build custom code or interface with other language-level facilities. End users have functions or procedures that lead, step by step, to the

information. Reporting capabilities range from simple, default-driven end-user requests to sophisticated, multiple–data base, custom-formatted reports with complex mathematical functions.

USER–11 is written in BASIC–PLUS–2 and MACRO.

A version of this product is available for the PDP–11 computer.

Price: $12,000 – $32,000
Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745–6006
USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

VAX–11/750 G & H Format Microcode

Operating System: VMS
Keywords:
- Disk utilities
- File management
- Microprocessor development
- Pre- and postprocessors

Distribution medium: TU58 DECtape II cartridge.

This package implements the G-floating and H-floating extended range and precision floating-point format instructions and a microcode loader. The G & H floating-point formats expand the exponent range up to 10** ± 4932 and the precision up to 33 digits. The microcode loader allows the system manager to control the loading of microcode into KU750 UCS hardware. The loader also provides for the reloading of microcode upon power-fail recovery of systems with main memory backup.

The VAX–11/750 G & H Format Microcode uses 1KW of control store provided by the KU750 and cannot be used concurrently with any other UCS microcode.

Refer to SPD #25.66.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

VAX–11/780 Microprogramming Tools

Operating System: VMS
Keywords:
- Assemblers
- Microprocessor development
- Programming tools
- Source code control

Distribution medium: RX01.

These tools enable a programmer to assemble and load microprograms for the User Writable Control Store (UWCS) option of the VAX–11/780 central processor. The tools consist of four features:

- MICRO–2 is an assembler written in BLISS–32 for user-written source microcode.

- VAXDEF, the definition file, describes to the assembler the VAX–11/780 microarchitecture. The definition file contains customer-written microcode statements. The output of the assembler is an object file containing absolute microcode and a listing file containing the user source microcode and related microcode output.
- MICLD is a utility program to load the UWCS memory of a VAX–11/780 CPU from a VAX–11/780 WCS microprogram object file. The utility program runs as a privileged task under VAX/VMS.
- A tool verification test invokes a sample program to ensure that the tools have been installed correctly.

Refer to SPD #25.09.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $290 – $1210
Contact: Consult your local DIGITAL sales office (see Introduction).

VAX–11/785 Microprogramming Tools

Operating System: VMS
Keywords: • Assemblers • Microprocessor development • Programming tools

Distribution medium: RX01.

These tools enable a programmer to assemble and load microprograms for the User Writable Control Store (UWCS) feature of the VAX–11/785 central processor.

VAX–11/785 Microprogramming Tools consist of:

- MICRO–2, an assembler for user-written source microcode.
- 785DEF, the definition file that describes to the assembler the VAX–11/785 microarchitecture. The definition file is assembled with the file containing customer-written microcode statements. The output of the assembler is an object file containing absolute microcode and a listing file containing the user source microcode and related microcode output.
- MICLD, a utility program to load the User Writable Control Store memory of a VAX–11/785 CPU from VAX–11/785 WCS microprogram object file. The utility program runs as a privileged task under VAX/VMS.
- A tool verification test that invokes a sample program to ensure that the tools have been installed correctly. The user must ensure the correct operation of all DIGITAL-supplied software when the VAX–11/785 UWCS is loaded with user-written microcode.

Refer to SPD #26.63.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

VAXELN Toolkit

Operating System: MicroVMS, VMS
Keywords: • Compilers • Debugging • Programming tools • Real time

Distribution media: 9-track 1600 bpi magnetic tape, RC25, RK07, RL02, RX50.

This VMS layered product is for the development of dedicated, real-time VAXELN systems that run on VAX and MicroVAX processors. A finished VAXELN system runs on the target computer by itself, without the presence of another operating system.

Typical applications include industrial automation, workstations for a particular profession, Ethernet server networks, and robots. Typically, although not necessarily, VAXELN applications are real-time applications — those in which the system's response to external events is critical, such as scientific and industrial data processing situations in which computer operation has to be synchronized with machines and special input/output devices.

Refer to SPD #28.02.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $6700 – $10,050
Contact: Consult your local DIGITAL sales office (see Introduction).

VISUAL/menu

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Application development • Forms management • Menu handlers • Programming tools

This UNIX* interface software masks the complexity of an operating system from end users yet provides developers with visually oriented tools for constructing complete user interfaces. VISUAL/menu provides menus to select application functions, forms for fill-in-the-blank data entry, and understandable help messages. Multilingual options are also available.

Developers use VISUAL/menu to organize a hierarchy of menus, forms, and actions. Users can paint menus, forms, and help instructions, using a visual editor, which is keystroke compatible with vi. Users can integrate actions incrementally into the application system.

VISUAL/menu features a full-screen visual editor to paint menus and forms, an internal data dictionary, a graphics editor to construct and display the interface hierarchy, and a monitor to debug applications.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $295 – $3995
Contact: Jeff E. Spencer
(313) 665–8778
COMPUTERIZED OFFICE SERVICES INC.
313 North First Street
Ann Arbor, MI 48103

VNX

Operating System: MicroVMS, VMS
Keywords: • VNX

VNX provides VMS productivity for UNIX* users who want to continue working in a familiar programming environment. VAX DEC/Shell, a command language with a syntax similar to that of the UNIX* Version 7 Shell, is used to gain access to the VMS operating system and its range of utilities and programs. VAX DEC/Shell, along with VAX DEC/CMS, VAX DEC/MMS, and VAX C, make up the VNX set of productivity tools. These VMS software products were developed to enable programmers to use UNIX*-like commands and procedures on VAX computers. Commands can be created that tailor programming routines to run in an interactive environment, thereby retaining most of the benefits of the UNIX* operating system while taking advantage of all the VMS software products and utilities.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

XFORM

Operating System: ULTRIX–32, VMS
Keywords: • Data entry • Forms management
• Menu handlers • Programming tools

This library of subroutines provides terminal-independent screen forms and video I/O. XFORM also includes an interactive menu-driven screen form editor. A screen form consists of background text, such as prompts, headings, and titles and fields for input and output. A field has processing attributes, a default value and/or missing value, and error-checking attributes.

Screen forms may be either disk resident or memory resident. The application program may use more than one screen form on the video terminal at a time. Screen forms may be used interactively on a video terminal or printed (with field values).

The screen form editor supplied with XFORM is an interactive menu-driven utility for creating and modifying screen forms. Screen form text is edited on the terminal screen exactly as the form will appear when used; field attributes are specified through fill-in-the-blank forms. Hard-copy documentation of screen forms may be produced at

any time. The specifics of screen forms, field attributes, and even the terminal model are isolated from the application program, so changes made in any of those areas usually require no program maintenance.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Amanda T. Wright
(609) 737–2727
PENNINGTON SYSTEMS INC.
65 S. Main Street, Building C
Pennington, NJ 08534

Distribution

Jeff Albertson/The Picture Cube

Absolut Business and Inventory Management

Operating System: ULTRIX–32, ULTRIX–32m
Keywords: • Accounting • Billing • Inventory • Order entry

Memory required: 256K RAM and 40MB disk storage.

This interactive, multiuser, multitasking package provides order entry and inventory control, as well as optional accounting functions for inventory-intensive businesses. The package, written in C, uses a Unify® relational data base and, optionally, color terminals. Every screen in this menu-driven package is backed up by on-line help.

Options include serialized and multisite inventory, credit card charge capability, and POS interface. Unify RDBMS provides SQL and a report generator for English-language query and custom report formatting.

Unify® is a registered trademark of Unify Corporation.

Price: $4900 – $95,000
Contact: J. T. McGrath
(617) 277–0610
ABSOLUT SOFTWARE
2001 Beacon Street
Boston, MA 02146

Accountant II Inventory Control System

Operating System: VMS
Keywords: • Inventory • Purchasing • Warehousing • Wholesale

This system, which works with the Accountant II Order Entry System, monitors the movement of merchandise from ordering to receiving. The system features inquiry capabilities that let you display merchandise on hand and on order, quantity allocated to unshipped orders, pricing, costs, and vendor information; a purchasing and receiving function that accepts order information, prints purchase orders, tracks the orders, and updates inventory; a physical inventory subsystem that reports physical inventory data; standard reports that monitor inventory levels and movements for management; and a low-inventory-level report, inventory movement (detail and summary) report, omission reports, purchase orders, open purchase order lists, receiving reports, and physical inventory reports.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Richard Northrup, Sales Director
(212) 221–2517
COMPUTRON BUSINESS SOLUTIONS, INC.
701 Seventh Avenue, Suite 9W
New York, NY 10036

Accountant II Order Entry System

Operating System: VMS
Keywords: • Billing • Order entry • Point of sale • Wholesale

This system includes inventory allocation, invoicing, automatic back ordering, variable pricing, and prebilling or postbilling operations. The system provides for variable discounting structures, special pricing, separate bill-to and ship-to addressing, variable salesperson commissions, and special terms. Normal default options established for each customer can be changed at order entry time for a particular order. All orders are verified against available inventory at order entry. Out-of-stock conditions are immediately known so that substitutions can be made. All items ordered are reserved to prevent overallocation of stock. The system provides warehouse picking documents, including a short-form Straight Bill of Lading, invoices; open-order lists, daily invoice registers; and out-of-stock reports.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Richard Northrup, Sales Director
(212) 221–2517
COMPUTRON BUSINESS SOLUTIONS, INC.
701 Seventh Avenue, Suite 9W
New York, NY 10036

ACUITY Customer Order Processing

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS
Keywords: • Billing • Credit • Order entry • Purchasing

ACUITY Customer Order Processing provides both 1-pass customer invoicing and 2-pass customer order entry with separate billing. Integrated with ACUITY Inventory Management, this on-line ordering system docks the inventory as the customer order is processed. Credit checking is also provided on line. The system allows blanket orders and can consolidate orders. It prints order acknowledgments, picking tickets, and invoices. Back orders can be automatically filled, and prices can be handled through flexible codes based on customer numbers, customer types, quantity ordered, product categories, item numbers, and/or special sale prices. Additional features include flexible pricing and discounts, selective and partial billing, multiple ship-to addresses, customer order status reports, and detailed sales history reports.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500
Contact: Sherrell Harper
(619) 474–2010
COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ACUITY Inventory Management

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS

Keywords: • Inventory • Manufacturing • Warehousing • Wholesale

This comprehensive multiple company and multiple warehouse tool is applicable to both manufacturing and distribution inventories. The system includes an ABC Analysis Report with optional update of inventory classifications. The Usage Exceptions Report compares actuals to forecasts. Inventory Management allows warehouse transfers, issues, and receipts and provides physical count tag support and cycle counting worksheets. The Inventory Stock Status Report shows the location of all inventory.

Additional features include automatic calculation of recommended minimum-order quantity; automatic calculation of average usage per period, which is used to forecast needs; user-set economic order quantity; automatic calculation of safety stock on the customer service level entered by the user on each item; and purchasing or manufacturing unit of measure, with a conversion factor between the purchasing and stocking units of measure, status code, stocked yes/no, cycle count code, and so on.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500
Contact: Sherrell Harper
(619) 474–2010
COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

AIS Inventory Accounting System

Operating System: VMS
Keywords: • Inventory • Warehousing

This stand-alone or integrated system provides on-line issues/receipts and stock availability; real-time update from sales and purchase orders; master, branch, and lot (serial number) data bases; standard and alternate part numbers; 13 periods of historical and forecasted usage; multiple company/warehouse facilities; bin locator and optimization; alternate shipping locations; support for LIFO, FIFO, average, and standard costing; physical inventory that does not interrupt on-line processing; multiple safety stock and reorder options; a report writer; and 12 standard inquiries and reports.

Price: Available upon request
Contact: Marketing Department
(415) 444–5954
ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94610

AIS Purchase Order Processing System

Operating System: VMS
Keywords: • Inventory • Materials handling • Order entry • Purchasing

This system for multiple company/warehouse facilities, established vendors, 1-time vendors, and vendor analysis handles automatic PO creation from requisition; on-line receiver and invoice creation and matching from PO; on-line printing of PO and update of accounts payable; 4-way on-line match; requisition, blanket PO, and inspection; an optional inventory module; expense allocations by PO line item; encumbrance accounting; change history up to 99 times a PO; and reconstruct PO.

Price: Available upon request
Contact: Marketing Department
(415) 444–5954
ARGONAUT INFORMATION SYSTEMS, INC.
383 Grand Avenue
Oakland, CA 94583

Apparel Master™

Operating System: UNIX* (System V)
Keywords: • Accounting • Manufacturing • Sales analysis • Wholesale

This apparel distribution and accounting system for wholesalers, importers, and manufacturers offers order entry, pick and pack, shipping and invoicing, and sales analysis. Size/style/color/season/multiple bill-to, ship-to, and so forth are provided. Optional accounting modules

include accounts receivable, accounts payable, and general ledger. This system automates the distribution cycle from receipt of goods to accounts receivable. The software is available for most mini- or microcomputers.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $15,000
Contact: Matthew B. Brosious
(212) 221–3016
COMPUTER MASTERS INTERNATIONAL CORP.
39 West 38th Street
New York, NY 10018

APPGEN Inventory/Order Entry

Operating System: UNIX* (Berkeley)
Keywords: • Inventory • Order entry • Purchasing • Warehousing

This system handles inventory by automatically generating information, providing a comprehensive master file, and allowing flexible pricing. This system interfaces to the Accounts Receivable system.

Inventory Management can perform multiwarehouse and company-wide tracking and can generate back-order information by item and customer. The system lists same-as, alternate, and complementary items. Invoices, credit memos, and picking tickets are generated as needed. Sales reports include sales analysis by product category, customer name or type, salesperson, or state and purchasing advice reports based on reorder level and quantity, including lead times and cycle turnover data. Other reports include an on-demand report of the cash value of present inventory, a stock status and history report, a stock status inquiry, and packing lists by picking sequence.

The master file handles quantity on hand, which is updated as stock is increased or depleted, receipts, transfers in and out, and returns. Sales quantity, physical adjustments, committed quantity, on-order, dollar sales, and cost of sales are also included.

A flexible pricing ability allows automatic recalculation of average cost of inventory items when new receivings are entered. Plus, virtually unlimited price class coding is provided at the inventory-item and customer-classing levels. The system prints multiple price lists and automatically performs rollover on effective date for new pricing.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $600
Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

BICAR (Billing, Inventory Control, and Accounts Receivable)

Operating System: VMS
Keywords: • Accounts receivable • Billing • Inventory • Sales and marketing

This generalized menu-driven software package, performing billing, inventory control, accounts receivable, and sales analysis, is highly operator oriented, with many operator-controllable options and extensive data entry verification checking. Designed for small businesses, the package is configured such that implementation may consist of specific function modules, such as billing or inventory control, or may comprise the total package.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: John T. Rasted
(203) 265–2226
SOFTWARE DYNAMICS, INC.
1000 Yale Avenue, P.O. Box 500
Wallingford, CT 06492

CAPE–PACK (Computer-Assisted Packaging Evaluation)

Operating System: VMS
Keywords: • Manufacturing • Materials handling

PALLET/STRENGTH provides efficient pallet patterns and shipping case board-grade combinations that meet pallet-handling and stacking-strength requirements. PALLET/STRENGTH allows you to increase pallet load use, reduce shipping and distribution costs, analyze load strength, select board-grade and flute type, and plot to scale pallet pattern diagrams. Stacking strength is computed, using IPC (Institute of Paper Chemistry) equations and is adjusted on the basis of magnitude of pallet overhand, pallet patterns, and relative humidity.

ARRANGE2 provides internal packing counts and arrangements in a case while meeting palletizing objectives. Alternative count or arrangement may reduce material costs and increase pallet load use without changing the package size. ARRANGE2 allows you to select case arrangements, evaluate case counts, plot arrangement displays,

increase pallet load use, and reduce material and distribution costs. Solution reports are produced on the basis of pallet load utilization and/or material cost.

DESIGN2 provides package designs (cartons, bottles, shippers, and so on) that meet marketing, packaging, material handling, and distribution costs. English and metric versions are available. On command, DESIGN2 can produce package size, internal packing arrangement, and pallet pattern loads that are clampable with a fork truck squeeze attachment. Cost contours are produced for different package sizes.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: William J. Rehring
(214) 680–1000
COMPUCON, INC.
P.O. Box 401229
Dallas, TX 75240

CAPE–SPECS (Computerized Packaging Specification System)

Operating System: VMS
Keywords: • Data base management • Materials handling

SPECS is a comprehensive management system for creating, modifying, storing, and retrieving packaging specifications. Customized reports and specification sheet formats are available. Generic packaging information is stored and automatically included on specifications.

SPECS is an interactive system allowing the user to select alternative strengths, styles, and designs from a stored menu. SPECS provides extensive error checking and a cross-referencing search and retrieve function for cross-referenced data from all package components. On-line multiplant/multidepartment communication is featured. An optional graphics package is available for storing engineering drawings for each package specification. The system can store all historical, current, and pending specifications. Optional programs are available to supplement the engineering and manufacturing office environment.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: William J. Rehring
(214) 680–1000
COMPUCON, INC.
P.O. Box 401229
Dallas, TX 75240

CDIS Inventory

Operating System: VMS
Keywords: • Inventory • Manufacturing • Warehousing • Wholesale

Memory required: 1MB.

CDIS Inventory, written in COBOL II, provides multiple-warehouse definition with alternate warehouse mapping; organizes warehouse stock locations by section, area, primary and secondary bins, and picking sequence; features user-defined carriers, routing, and freight terms; defines unlimited units of measure by product, with metric/English conversion; and defines multiple units of measure for shipping, purchasing, and selling, with cost conversion to stock-keeping unit. Products are identified by number, product description, unit of measure, product category, and National Motor Freight codes and can be assigned to buyer responsibility. Alternate products provide cross-reference with prioritized selection by warehouse.

Kits feature component assembly capabilities for finished goods; costing methods feature average, current, last price paid, standard, LIFO, or FIFO. Item masters record unit costs, buying parameters, stock locations, ABC counting parameters, and sales and transfer history. Receiving is accomplished by purchase order or by product number. Reserve stock is recorded by warehouse for customers, manufacturing, or transfers with applicable review dates. Stock-status function features on-line view of inventory levels in any or all warehouses, with prioritized alternate product selections.

Price: $15,000
Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS Purchasing

Operating System: VMS
Keywords: • Manufacturing • Order entry • Purchasing • Wholesale

Memory required: 1MB.

CDIS Purchasing, written in COBOL II, features vendor file maintenance, including address, ship-from, paid-to, and payment terms; inventory reports of product items by manual intervention or by focus forecasting; suppliers' listings for each product, including price, discount, lead time, and shipping information; purchase order entry; a look-up feature that locates specific vendors or potential suppliers; reviews and hash totals that provide a running order entry summary and that place built-in holds on orders when unacceptable conditions exist; on-line matching of a purchase order to the vendor's invoice;

restriction of order management to authorized users; on-line inquiries and standard reports; and the ability to print and to process inventory and noninventory orders based on a date range or an order number.

Price: $15,000
Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS Requisitioning

Operating System: VMS
Keywords: • Manufacturing

Integrated with CDIS Inventory, Requisitioning accommodates the process of requisitioning items from inventory, including stock from other warehouses. Integrated with CDIS Purchasing, the system also handles requests for stock purchased from outside vendors.

Requisitions and requisitioners may be specified in various ways. A requisitioner may be defined by department and category. Unlimited ship-to locations may be associated with each requisitioner. Back orders are automatically listed by requisitioner. On-line inquiries are available by product, product unit of measure, warehouse, requisitioner, open amounts, order dates, order status, or hold code.

Other features include the ability to establish order limits, indicate back-order and substitution policies, allocate stock on line, and generate 11 standard reports.

Price: $15,000
Contact: Roy E. Mann
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS Sales Analysis

Operating System: VMS
Keywords: • Manufacturing • Report writer • Sales analysis • Wholesale

Memory required: 1MB.

CDIS Sales Analysis, written in COBOL II, is an option for CDIS Sales Orders. This package provides standard reporting for monthly and year-to-date sales, profits, and costs for warehouses, customers, customer and product categories, sales territories, and product and vendor lines. Sales Analysis consists of reports comparing and grouping categories of performance. Item contribution reports classify items by highest dollar and profit contribution for individual and consolidated warehouse sales.

Price: $5000
Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CDIS Sales Orders

Operating System: VMS
Keywords: • Billing • Manufacturing • Order entry • Wholesale

Memory required: 1MB.

CDIS Sales Orders is written in COBOL II. The customer master file includes credit and billing information and credit and order limits. Customer master files can be assigned different billing addresses and multiple ship-tos. Sales territories can be established with consolidation and cost center definitions. Salespersons can be assigned as employees or as company agents, with user-defined commission plans and sales goals. Multiple pricing parameters can be established by any combination of product, product category, warehouse, unit of measure, or customer category territories. Other pricing attributes include setting minimum markup base prices and surcharges and discounts with effective periods and quantity ranges. Sales contracts can be established with special prices, committed product quantities, and designated dates of duration. The Sales Order entry program allows minimal data entry and furnishes default information. Order entry error messages may be overridden to process orders; the order remains suspended until cleared through order management. Unlimited text and line-item definition is provided on order entry with shipped-from-warehouse dates and shipped-by dates. Order inquiry features order status look-ups, such as by warehouse, customer, hold codes, and line-item status. Text messages can be maintained for specified customers, sell-tos, products, and/or lots and units of measure. Messages can be assigned to print out sales orders, invoices, or picker/packers or may be left as display information only.

Price: $15,000
Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

CHIPS

Operating System: VMS
Keywords: • Accounts receivable • Inventory • Order entry • Purchasing

This comprehensive inventory management and order processing system, written in DIBOL, allows wholesalers to handle a large number of special and rush orders. Orders can be entered for items that are not in the inventory master file and can be processed along with regular items. The primary modules are Order Entry, Purchasing, Order Receiving, Invoicing, Accounts Receivable, and Sales Analysis. The Purchasing system allows the purchasing agent to inquire about needs by vendor code, customer, or order priority. The Order Receiving system allows quick entry of received orders and automatically generates invoices for back-ordered items. CHIPS is used by distributors with up to $25 million annual volume.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $35,000
Contact: Ralph Gordon
(502) 683–6287
DIGITAL GROUP, INC.
425 Leitchfield Road
Owensboro, KY 42301

Computer Accounting and Management System for the Distribution Industry

Operating System: VMS
Keywords: • Inventory • Order entry • Sales and marketing • Warehousing

This interactive software system supports an on-line multilocation distributed processing operation. With complete dependence on menu displays and operator prompting, this user-friendly system performs order entry, inventory control, accounts receivable, accounts payable, general ledger, sales analysis, payroll, fixed assets, mailing lists, and word processing functions. These fully integrated modules are written in high-level COBOL and can easily be customized.

The CRT video display is the focal point of the system. Operators can perform all the system functions on any CRT display. Security measures are available to limit access to sensitive areas within the system. Information inquiries, data entry, and report generation functions can be handled concurrently, as needed, from work stations in the central office or at remote locations.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Michael Hansen, Marketing
(404) 399–6325
CMCS — COMPUTER & MANAGEMENT
CONSULTANT SERVICES
1155 Hammond Drive, Suite 5220
Atlanta, GA 30328

CRIB (Computer Recommended Investment Buying)

Operating System: VMS
Keywords: • Investments • Purchasing • Wholesale

This group of seven integrated modules enables the user to perform forward or investment buying functions and to maximize cost savings opportunities through prudent investment purchases. Selected reports are produced for the user, and complex formulas and logic throughout the modules have been thoroughly tested in application.

CRIB enables each user to specify dollar, space, and handling costs; minimum return desired; select items to buy; amount available for investment; maximum time period; amount of storage space; and reports desired. CRIB features on comprehensive reports the centralized control of multiple distribution centers, divisions, regions, warehouses, areas within each warehouse, and each buyer and department. The system provides item shelf life or code dating, future promotional allowance/price increases, significant seasonal sales peaks, vendor-imposed quantity limits, and management policies unique to the company.

CRIB minimizes investment risk by considering past demand history, past forecast accuracy, overforecasts, down-trending sales, price sensitivity of items, and length of time an item has been inventoried. The system maximizes returns on limited investment capital by choosing those investments yielding the highest savings and profits and maximizes returns from limited warehouse space.

Price: $24,000 – $60,000
Contact: Larry Smith
(415) 494–2233
SYSTEMS CONTROL TECHNOLOGY, INC.
1801 Page Mill Road
Palo Alto, CA 94303

DACMS (Distribution and Cash Management System)

Operating System: VMS
Keywords: • Inventory • Order entry • Purchasing

Distribution medium: 9-track 800/1600 bpi magnetic tape.

DACMS provides a fully integrated series of program modules: Purchasing, Material Management, Order Processing, and Cash Management. Designed through years of user interaction, the system includes more than 50 application programs for any business that needs clear, informative inventory and cash management reports.

Available for fast, efficient, trouble-free installation, DACMS is a turnkey system, providing efficient transfer from your current system to DACMS.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: George B. Weaver
(612) 571–1249
CUSTOM DIGITAL SERVICES
999 50th Avenue Northeast
Minneapolis, MN 55421

Dairy Route Accounting System

Operating System: VMS
Keywords: • Accounting • Credit • Inventory • Service industries

This set of more than 80 routines in five functional areas is used to control the home delivery of dairy products. Ordering, inventory control, accounts receivable, sales analysis, and customer service functions are combined in a package developed exclusively for this business.

The subsystems include customer service, preorders, inventory control, deliveries, and credit and collection. Extensive sales, inventory and account analysis reports, route sheets, combination invoice/accounts receivable statements, and exception reports are available, depending on user selection.

Price: $25,000
Contact: Bill Gunn
(303) 425–0663
KIMBROUGH COMPUTER SALES, INC.
3705 Kipling
Wheat Ridge, CO 80033

Datacode® Distribution Requirements Planning

Operating System: VMS
Keywords: • Inventory • Scheduling • Warehousing

Memory required: 128K minimum.

This subsystem, written in COBOL or RM/COBOL, provides distributors with comprehensive reports and on-line inquiry procedures to help plan, monitor, and control the inventory. This subsystem for a single or multiple-warehouse environment manages inventory levels for optimum return on inventory investment.

Procedures are provided to create suggested replenishment action reports and on-line inquiries by comparison of orders and forecast against available, on-order, and in-transit stock. Additional reports and on-line display show demand and replenishment data in various formats. Data is reported in summary or in detail for user-selected time spans. Data is presented either summarized — by weeks, a 10-day period, or a month — or in detail, by specific day. Summary reports can show, in detail, each transaction from which summary data is derived.

Price: $5000 – $10,000
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Inventory Control

Operating System: VMS
Keywords: • Inventory • Materials handling
Memory required: 128K minimum; 256K optimum.

This system, written in COBOL or RM/COBOL, allows material and accounting management personnel to account for and manage inventories. The system is menu driven and operates in a simple, conversational mode with on-line tutorial help screens. A security menu allows the user to establish procedure-level password protection and to define parameters, tables for controlling the system, and interfaces with Sales Order Processing, Purchasing, Work in Process, and Material Requirements Planning. The system can support up to 98 companies, each having 98 warehouses, with each warehouse having single or multiple stock locations. On-line stock inquiry shows the status of items in all warehouses. In the inquiry mode, item number, product category, or item description search facilities are provided.

Inventory transaction costing and valuation can be at average, landed (entered), FIFO or LIFO, or standard cost for manufacturing applications. Complete audit and accounting reporting is available on daily and fiscal-period bases. Comprehensive procedures for annual and cyclical physical count are included in the package.

The inventory management reports provide information for controlling inventories and establishing replenishment policies. Reports include request for reorder, ABC analysis by sales, and gross profit and inventory analysis.

The system provides interactive procedures for reports, on-line inquiries, item master maintenance, inventory transaction procedures, physical count procedures, and inventory management security procedures.

Price: $9000 – $17,000
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Order Processing

Operating System: VMS
Keywords: • Billing • Order entry

Memory required: 128K minimum, 256K optimum.

This on-line system for creating, maintaining, releasing, and invoicing customer orders operates in a menu-driven, conversational mode with tutorial help screens. Order Processing is written in COBOL or RM/COBOL.

The system interfaces with Datacode Inventory Control, Sales Analysis, Forecasting, Distribution Requirements Planning, Accounts Receivable, General Ledger, Work in Process, and Material Requirements Planning systems. As a result, the information is always current and available.

The system allows various ordering, shipping, pricing, discounting, commission costing, and taxation requirements. Credit checking is performed at order entry (before/after) and release time. A credit hold release capability is provided, with credit exception reporting on demand. Up to 90 ship-to records can be established for each customer. One-time drop-shipment data may also be entered. Orders may be created with single or multiple release dates by line item. Picking slips are printed on request, and complete back-order management is included.

Price: $9000 – $17,000
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Purchasing

Operating System: VMS
Keywords: • Purchasing

Memory required: 128K minimum.

The Datacode Purchasing system, written in COBOL or RM/COBOL, provides control of replenishment requirements for manufacturers and distributors. The system is menu driven and operates in a simple conversational mode with on-line tutorial help screens. A replenishment request report advises management of items that have reached reorder point. Purchase order maintenance facilities have maintenance audit reporting. On-line inquiry to the open purchase order data base is available. Receipts and invoices can be entered against open purchase orders in any sequence. Receipt and invoice audit registers are provided, as well as open purchase order reports, in various selections and sequences. An expediting report highlights outstanding orders with

items whose scheduled receipt date is past due. A projection report details purchase orders and items scheduled for receipt during the next 90-day period.

Price: $5000 – $10,000
Contact: Al K. Margis
(416) 625–1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Datacode® Sales Forecasting

Operating System: VMS
Keywords: • Forecasting • Inventory • Warehousing
Memory required: 128K minimum.

The Datacode Sales Forecasting, written in COBOL or RM/COBOL for a single or multiple-warehouse environment, has an item forecast for every item at every branch warehouse, based on that warehouse's customer demand. Additional forecasts are developed for each item by the total demand at the branch warehouses. The second forecast is for the "primary warehouse." One or more primary or branch warehouses may be found for an item. The primary warehouse is the focal point of the forecasts for an item and is the source of replenishment orders and control of stock among its associated branch warehouses.

The sales forecast is generated from sales and demand history maintained by Datacode Order Processing and Sales Analysis systems.

The system features:

- Forecast by the net requirements of branches, leading to a more reliable forecast
- Orders originating only from the primary warehouse, reducing the number of orders
- A lower total investment required, since both the working and safety stocks are controlled by the primary warehouse, each branch receiving stock based on forecasted demand
- Safety stock retained at a primary warehouse and distributed to a branch warehouse when required
- Model options

Price: $5000 – $10,000
Contact: Al K. Margis
(416) 625– 1037
RAUS COMPUTER SYSTEMS LTD.
1945 Dundas Street East, Suite 213
Mississauga, Ontario L4X 2T8
Canada

Daymark Wholesale Distribution System

Operating System: VMS
Keywords: • Accounting • Inventory • Purchasing • Wholesale

This comprehensive interactive series of programs for food, poultry, and fish distribution gives management control of the distribution environment. Menu orientation makes this system easy to learn and simple to use, and it operates on a single- or a multicompany basis.

Daymark provides for order entry, picking, truck routing, invoicing, sales analysis, inventory control (by catch weight), purchasing, accounts payable, accounts receivable, general ledger, and analysis reports that track sales, profit, and movement of product by vendor, by customer, by chain, by territory, and by salesperson.

Daymark features:

- Product sales, on order, returns, counts, receipt, restocking, price book, and out of stock by customer management
- Truck load control by case/pack and weight/size/average
- Production of picking slips by bin location, by customer, by truck, or by route
- Invoicing for random-weight items and automatic and special pricing
- Twenty-six selling prices for each item
- Optional dunning and/or promotional messages
- Daily gross profit report by customer and products

A version of this product is available for the PDP–11 computer.

Price: $3995 – $15,995
Contact: Gary L. Grierson
(513) 236–7072
DAYTON DATA PROCESSING, INC.
60 Heid Avenue
Dayton, OH 45404

Distribution — Wholesale and Retail

Operating System: VMS
Keywords: • Purchasing • Retail • Warehousing • Wholesale

This comprehensive set of modules is installed in a wide variety of major distributors. More than 12 years experience in on-line commercial distribution is built into the packages.

Multiwarehouse, sophisticated inventory control, and sales management are integrated into financial accounting.

A version of this product is available for the PDP–11 computer.

Price: $30,000 – $100,000
Contact: Dr. E. A. Haworth
(061) 248–7100
MANCOS COMPUTERS
3 Wynnstay Grove, Fallowfield
Manchester M14 6XG
United Kingdom

Distribution Management System

Operating System: VMS
Keywords: • Inventory • Order entry • Retail • Sales analysis

This interactive system allows one to process customer orders, keep inventory, create invoices, and store sales information. The system provides for price changes, cost calculations, inventory status, and sales data and supports sales history, gross profit, and inventory control. In addition, the system can integrate fully with the Accounts Receivable and General Ledger systems. The system greatly reduces time and effort in creating, shipping, and billing orders. Features of the system include:

- Validation: Data is validated when entered, thus increasing productivity and reducing the likelihood of shipping the wrong product.
- Control: System accuracy is ensured through batch totals and data entry journals.
- Management reports: Order processing provides management and summary reports showing customer and inventory activity, helping the user plan and manage.
- Integration: Complete integration is provided with the general ledger through the Accounts Receivable System. Journal and general ledger account numbers are controlled by the user.
- Manual override: Automatic features may be changed by data entry operations, meeting unique requirements easily.
- Immediate updating: The system identifies items on order, back ordered, reserve amounts ready for shipment, and items on hand.
- Credit control: Customer preset credit limit is used to control order entry.

A version of this product is available for the PDP–11 computer.

Price: $3000/module – $5000/module
Contact: E. Jackson Smith
(301) 296–9032
SMITH, ABBOTT, AND COMPANY, INC.
300 E. Joppa Road
Baltimore, MD 21204

Distribution System (Wholesale/Retail)

Operating System: MicroVMS, VMS
Keywords: • Accounting • Inventory • Warehousing • Wholesale

Distribution medium: magnetic tape.

This comprehensive set of on-line interactive programs, written in BASIC–PLUS–2, helps manage distribution businesses in a more timely and cost-effective manner. The Distribution System includes Inventory Control, Customer Maintenance, Order Entry/Billing, Physical Inventory, Purchasing, Sales Analysis, Work Order Maintenance, Labor Reporting, Accounts Payable, Accounts Receivable, and General Ledger/Financial Reporting systems. Source code is available.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $60,000
Contact: Steven R. Simmerman
(414) 784–8250
MCHUGH, FREEMAN AND ASSOCIATES, INC.
1135 Legion Drive, P.O. Box 454
Elm Grove, WI 53122

Distribution System/Inventory Control, Sales Analysis, Order Processing

Operating System: VMS
Keywords: • Inventory • Order entry • Sales analysis

Memory required: 1MB.

AMCOR's Business Control System (BCS) for distribution organizations consists of the following three software packages:

- Inventory Control — An on-line interactive system that controls the basic inventory functions and that provides comprehensive reports for efficient inventory management. The system manages restocking, physical count processing, inquiry, price books, and file maintenance for single or multiple warehouse locations. The system provides comprehensive master and warehouse records, quantity and customer-based pricing, and trade, customer, and chain discounting. Provisions are also made for replacement, highest replacement, average, and user-defined costs. The complete reporting features allow for timely, effective management for cost control.
- Order Processing — An interactive system with operator prompting and extensive on-line editing and validation of order entry information. The system automatically adds data to existing order data. Picking tickets and invoices are automatically produced from the open-order file. Complete maintenance is available against open orders. The system operates in prebilling and/or postbilling environments and provides for simultaneous entry of orders from multiple

terminals, multiple-location processing, multiple selling prices, and automatic back-order and future-order (seasonal) control with full reporting.

- Sales Analysis — An on-line reporting module that helps management make informed business decisions and that provides customer, salesperson, and product information for current periods, year to date, and defined combination. Full maintenance capability is provided for changing, adding, or deleting information.

A version of this product is available for the PDP–11 computer.

Price: $7500 – $45,000

Contact: Marketing Department
(502) 491–9820 or 1–800–626–6268
AMCOR COMPUTER CORP.
1900 Plantside Drive
Louisville, KY 40299

DMS–1000 Distribution System

Operating System: VMS

Keywords: • Accounts receivable • Inventory • Order entry • Warehousing

The system, designed to support all phases of finished-goods inventory control and distribution for medium and large companies, handles order processing, inventory management, sales analysis, invoicing, and accounts receivable. Most functions are performed on line, and reports for audit, operations support, and management analysis are provided.

The system is sold as an independent package and operates in either distributed or centralized mode. Modules are fully integrated, and a range of options can be added at any time. The package also includes operating support/maintenance software and implementation services. Modules that can be purchased separately are accounts receivable, physical inventory support, requirements planning, and finished-goods inventory replenishment. The package can be customized by either DMS or the customer.

The DMS–1000 Multinational Distribution System is a specialized version of the DMS–1000 and adds currency conversion, multilingual capability, customs/duty documentation, and accounting to the baseline DMS–1000 System.

The functionality of the DMS–1000 and the DMS–1500, including Order Processing, Inventory Management, and Warehouse Management, has been combined in the DMS–2500 Distribution and Warehouse Management System.

Price: $145,000
Contact: Chris Freedland
(617) 863–5000
DISTRIBUTION MANAGEMENT SYSTEMS, INC.
81 Hartwell Avenue
Lexington, MA 02173

DMS–1500 Warehouse Management System

Operating System: VMS
Keywords: • Data dictionary • Inventory • Order entry • Warehousing

This interactive system provides a complete tool to improve warehouse information processing and to control inventory storage and distribution. Designed to interact with automated materials-handling equipment, as well as with bar code readers and hand-held terminals, the system handles order processing, picking and shipping, inventory location and control, and receiving and putaway.

Productivity analysis is available on an optional basis. The system uses a random stock locator to optimize the use of warehouse space and also handles lot, serial number control, expiration dates, and so on. The package can be customized by either DMS or the customer. The system is easily interfaced to the DMS–1000 Distribution System and the DMS–1800 Distribution Resource Planning System.

The functionality of the DMS–1000 and the DMS–1500, including Order Processing, Inventory Management, and Warehouse Management, has been combined in the DMS–2500 Distribution and Warehouse Management System.

Price: $85,000
Contact: Chris Freedland
(617) 863–5000
DISTRIBUTION MANAGEMENT SYSTEMS, INC.
81 Hartwell Avenue
Lexington, MA 02173

Dovetail

Operating System: VMS
Keywords: • Accounting • Inventory • Sales analysis • Wholesale

Distribution media: data communications, disk pack, magnetic tape.

This comprehensive accounting and management system for wholesale distributors supports simultaneous users at VT100 or VT200-series (or equivalent) interactive display terminals. Applications in the system include order entry and order processing, shipping, invoicing, accounts receivable, purchasing and receiving, accounts payable,

payroll and commissions, and budgeting and sales analysis. Transactions are automatically posted to the integrated general accounting system.

Dovetail's QUERY function permits any user to look up customer records, order status, inventory, and other information without having to know account numbers or other codes. The system's flexible, modular design enables each user to customize the system without costly reprogramming.

Dovetail's report generator features simple menu prompts for on-demand creation of either standard or special reports. All financial reports can be produced at nine levels of detail.

A version of this product is available for the PDP–11 computer.

Price: $18,000 – $34,000
Contact: Thomas Considine
(617) 484–6814
CONSIDINE COMPUTING SERVICES
490 Trapello Road
Belmont, MA 02178

DTRO BOMP (Bill of Materials Processor) System

Operating System: MicroVMS, VMS
Keywords: • Bill of materials • Manufacturing

This integrated system operates in a manufacturing or assembly environment and provides bill of materials file building, file maintenance, and file inquiry through interactive user dialog, as well as an interactive where-used inquiry to show all products or assemblies that any given part or subassembly is used to make. The quantity needed is shown and, optionally, labor and machinery requirements. The system also features product explosion showing, for any product entered, all levels of subassembly and part or raw-material requirements. The availability of each assembly or part in inventory is checked. The materials cost for manufacturing one unit of the product and for the total order is computed; optionally, personnel and machinery requirements are totaled.

This system interfaces with the DTRO item file and others and is associated with a Materials Requirements Planning system, which uses the same files.

A version of this product is available for the PDP–11 computer.

Price: $1500
Contact: Bill Benton
(415) 861–5454
DTRO SOFTWARE
1229 7th Avenue
San Francisco, CA 94122

DTRO Inventory Management System

Operating System: MicroVMS, VMS
Keywords: • Inventory • Purchasing • Report writer

The Inventory Management System, written in COBOL, calculates the requirement for reordering every item in inventory, using the "service point" analysis approach. A recommended purchase report results, showing the minimum purchase needed to maintain management's service target. Additional purchases before announced cost increases are analyzed to show the most profitable extra purchase. The system accepts forecast updates from the Forecasting System and status information from the Order Entry System. Fully discounted purchase orders are printed, including many user options for printing and commenting.

A flexible report generator, with 12 preprogrammed reports, is included. File extracts are simple to add. The approach has been tested on more than 200,000 items in major firms. The system is fully documented, with full support available for installation, training, consulting, and customizing.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $10,000
Contact: Bill Benton
(415) 861–5454
DTRO SOFTWARE
1229 7th Avenue
San Francisco, CA 94122

DTRO Multilocation Distribution System

Operating System: MicroVMS, VMS
Keywords: • Inventory • Purchasing • Sales analysis • Wholesale

This system includes the following applications programs:

- Order Processing is an interactive, user-oriented, on-line system for entering sales orders into the computer and controlling the steps involved in picking and shipping the products and billing the customer. Some features are interactive access to all data on products, customers, suppliers, and open orders; sequenced pick lists showing ship quantity, back-order quantity, and so on; and extensive discounting and text-printing options in invoice printing.
- Forecasting makes forecasts based on the "exponential smoothing" method, a type of weighted averaging. Initial forecasts and associated factors are created by a program that places them directly on file. Special computation for slow-moving items is included, as are demand filters and tracking signals. Full or exception output may be specified.

- Inventory Management calculates the reordering requirement for every item in inventory, using the "service point" analysis approach. The result is a recommended purchase report showing the target purchase needed to maintain service. Additional purchases before cost increases are analyzed to show the most profitable extra purchase. Fully discounted purchase orders are printed. The goods-receipt program is interactive.
- Accounts Receivable gives fully detailed open-item aged account statements. Cash application is by means of interactive dialog, and supporting sales and payment transactions are available on line for problem solving.
- Bill of Materials Processor explodes products into component parts, checks availability of each assembly or part, and gives total product cost.

DTRO data base programs provide interactive access to customer, item, vendor, and bill of materials files. Dialogs for adding, deleting, changing, listing, and inquiring provide convenient, powerful file-management methods. A report generator is included.

A version of this product is available for the PDP–11 computer.

Price: $12,000 – $25,000

Contact: Bill Benton
(415) 861–5454
DTRO SOFTWARE
1229 7th Avenue
San Francisco, CA 94122

DTRO Order Processing System

Operating System: MicroVMS, VMS

Keywords: • Manufacturing • Order entry • Wholesale

This interactive, user-oriented, on-line system, written in COBOL, enters sales orders into the computer and then controls the steps involved in picking, shipping, and billing the products. Some major features are:

- Total interactive, multilocation access to all data on products, customers, suppliers, and open orders
- Ability to review, change, cancel, or add to any order at any point in the entry process
- Sequenced pick lists showing ship quantity, back-order quantity, and so on
- Easy adjustment of orders as entered to reflect shorts, substitutions, and so on
- Extensive discounting and text-printing options in invoice printing
- Open-order file with details of each purchase order, for ease of verifying invoices
- Output file in the proper format for DTRO accounts receivable

• Input files easily created by DTRO File Management

This system is fully documented, with full support available for installation, training, consulting, and customizing.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $10,000
Contact: Bill Benton
(415) 861–5454
DTRO SOFTWARE
1229 7th Avenue
San Francisco, CA 94122

DTRO Purchasing System

Operating System: MicroVMS, VMS
Keywords: • Purchasing

The DTRO purchasing system includes a purchase order module and a goods-receipt program. In the comprehensive Purchase Order module, written in COBOL, quantities are determined by demand forecasting and inventory review programs and by management input. The program takes advantage of all available discounts, which may be standard or special, and computes the most profitable buy. Discounts may be permanent or temporary and may be applied to individual or all items from a particular vendor. The program recognizes special discounts, as the user desires. The program maintains an audit trail accounting for all amounts entering the program.

The GOODSIN module allows the user to enter receipt of goods into the system. The interactive dialog makes entry easy, and the user is prompted for all key information items. The user can query the module for information on all purchase orders. GOODSIN immediately updates both the purchase order and item file records, maintaining accurate control of key information. Inquiry is available by vendor name or date range, if the purchase order number is unknown. The system can record up to five partial goods receipts against each detailed purchase order line and coordinates with the overdue-orders listing. The system provides dynamic lead-time updating; when goods receipt occurs, lead time for that item is revised to reflect current time.

Both modules are documented, with full support available for installation, training, consulting, and customizing.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $10,000
Contact: Bill Benton
(415) 861–5454
DTRO SOFTWARE
1229 7th Avenue
San Francisco, CA 94122

Electronic Component Distribution System

Operating System: VMS
Keywords: • Electronic • Inventory • Order entry • Wholesale

The electronic component distribution system is specially designed to improve and maximize profitability of distributors of components, boards, and modules. This well-proven, robust system can be supported worldwide and is installed in the United States, United Kingdom, France, and Germany.

The system is very economical to run and easy to install and has many features specific to electronic component distribution.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $60,000
Contact: Dr. E. A. Haworth
(061) 248–7100
MANCOS COMPUTERS
3 Wynnstay Grove, Fallowfield
Manchester M14 6XG
United Kingdom

Export Package

Operating System: VMS
Keywords: • Import/export • Management • Manufacturing • Transportation

This software for export manufacturers, suppliers, and export management companies produces documents, provides tracking, and performs all accounting functions.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Richard Bowe
(603) 898–7000
ASA INTERNATIONAL TRADE SERVICES
10 Manor Parkway
Salem, NH 03079

FACS — Inventory and Order Entry

Operating System: VMS
Keywords: • Inventory • Order entry • Report writer

This package contains four subsystems: parts master processing and reporting, purchase order processing and reporting, sales order processing and reporting, and kit processing. The system features direct interface to the FACS A/R and concurrent operation with the FACS G/L; full branch location capabilities; inventory valuation using LIFO, FIFO, or average costing; alphanumeric part numbers; user-

definable fields in parts master; G/L cost and sell cost for each part; five selling prices for each part; screen inquiry for stock status; intercompany transfers; and selective cost and/or price adjustments.

Reporting features include inventory valuation and sales order status reports; inventory transactions listing; purchase order status and cash forecasting reports; sales history report by customer; customized invoices, purchase orders, and picking/packing lists; committed inventory report; user-defined parts master listing; and user-defined on-hands inventory report. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

Freight Forwarder System

Operating System: VMS
Keywords: • Accounting • Materials handling • Transportation • Warehousing

This system is used by the major United Kingdom surface and air forwarders. More than 40 locations use the system, which has modules covering all aspects of international freight movement. Financial control, multicurrency ledgers, and job costing ensure maximum profit. Traffic analysis permits market viability to be analyzed.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $60,000
Contact: Dr. E. A. Haworth
(061) 248–7100
MANCOS COMPUTERS
3 Wynnstay Grove, Fallowfield
Manchester M14 6XG
United Kingdom

Fuel Oil Accounting/Delivery Scheduling

Operating System: VMS
Keywords: • Accounts receivable • Billing • Petroleum • Scheduling

The ADD Fuel system helps the petroleum marketer to forecast deliveries on either a degree day or a dated basis, automatically adjust for hot-water consumption in all seasons, control credit and collections, and generate dunning notices as required. The system can also produce "instant invoices" and "instant statements," maintain balance-forward and open-item accounts, and process budget and nonbudget

accounts. The system accommodates accounts that purchase multiple products or that have many delivery locations. Accounts may be located and all account information displayed on a terminal through the account's name, address, number, telephone number, or practically any other key.

A report generator is an integral part of this system, thus allowing the user to produce ad hoc reports. The system also provides a total accounts receivable system, including sales and cash journals for any period desired by the user as well as detailed tax reports and summaries.

The ADD Fuel system interfaces with the ADD General Ledger system to provide easy and accurate transfer of sales and other GL data at month's end.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $30,000
Contact: Bruce A. Bott, President
(201) 584–4026
ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

I–Distributor

Operating System: ULTRIX–32, VMS
Keywords: • Accounting • Inventory • Order entry • Purchasing

The I–Distributor package consists of the following modules: Customer Order Entry, Invoicing, Sales Analysis, Distribution Performance Analysis, Distribution Requirements Planning, Warehousing, Inventory Management, Forecasting, Purchasing, Costing, General Ledger, Accounts Receivable, and Accounts Payable. Modules are integrated with a fourth-generation DBMS with full ad hoc query capability. Modules can be added as required. Data entry screens and reports can be customized. Complete training, implementation, and support are offered.

Price: $20,000 – $40,000
Contact: Ray Talwar
(416) 248–9494
INFO–POWER SOFTWARE CORP.
557 Dixon Road, Suite 110
Rexdale, Ontario M9W 1H7
Canada

IC–11 (Inventory Control)

Operating System: MicroVMS, VMS
Keywords: • Inventory • Retail • Warehousing

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system is a layered product, requiring OE–11 and AR–11 as a base. The combination of these three packages provides the user with complete information for maintaining inventory records, placing orders, invoicing, and updating accounts receivable information. Other user-oriented features include:

- Unlimited units of measure for each product for different packaging, lengths, types, and colors
- User-defined decimal-point positioning for inventory quantities in an 18-character field
- Multiple warehouses and transfers between warehouses (for both independent and branch) allowed
- Four costing methods (LIFO, FIFO, average cost, and specific cost)
- Automatic cost adjustments reflected in both invoiced and stock merchandise and automatic costing of orders as they are invoiced
- Reports for an unlimited date range by warehouse, unit of measure, and product
- A purchase analysis that calculates inventory movement and last month's sales and compares reorder quantities
- Calculation of inventory turnover
- A selection to freeze inventory quantities for a portion of inventory to allow an accurate physical count
- A password security system
- Interfaces to OE–11 Order Entry and AR–11 Accounts Receivable; other complementary products include the GL–11 General Ledger, AP–11 Accounts Payable, PY–11 Payroll, FA–11 Fixed Assets, and CN–11 Job Cost systems

IC–11's reports include inventory stock reports, purchase analysis, inventory movement, inventory turns, a user-designed inventory count sheet, freeze quantities, and a units-of-measure listing.

The IC–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $5600 – $17,500
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

ICAMS (Inventory Control and Management System)

Operating System: VMS
Keywords: • General ledger • Inventory • Order entry • Wholesale

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This complete order entry and inventory control system applies discounts and quantity breaks by vendor line and customer. ICAMS identifies substitution and alternate inventory items, offers bill-to and multiple ship-to capabilities, and contains 99 price levels based on customer type. In addition, this system interfaces completely with inventory and sales analysis systems and with accounts payable, purchase order, accounts receivable, and general ledger systems.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $15,000
Contact: Anthony J. Ruggeri
(314) 644–4050
AUTOMATED INFORMATION INC.
6710 Clayton Road
St. Louis, MO 63105

IDW–5

Operating System: VMS
Keywords: • Accounting • Inventory • Retail • Wholesale

The IDW–5 package provides order entry, inventory control, accounts receivable, accounts payable, purchasing, and payroll — all integrated to a sophisticated general ledger. Those packages have been installed in a variety of industries, including tire, office supply equipment, automotive, lawn and garden, and food. The unique table-driven software can be tailored and enhanced for applications in the wholesale or the retail field. The IDW–5 package is fully supported in Canada.

A version of this product is available for the PDP–11 computer.

Price: $100,000
Contact: Ed Katz
(602) 897–9576
SYSTEMS BY MICA, INC.
6101 S. Rural Road, Suite 101
Tempe, AZ 85283

Import Master™

Operating System: UNIX* (System V)
Keywords: • Import/export • Inventory • Order entry • Textiles/clothing

Memory required: 64K minimum.

This complete software system for footwear and garment companies that import most of their products handles factory orders and in-stock orders. Comprehensive inventory control, factory purchase-order processing, order tracking, bill-of-lading processing, L/C tracking, and customs and factory documents are prepared. Shipping advice for a particular order is tracked and is available as a report.

This system eliminates the administrative burden associated with importing goods and provides correct, up-to-date information on customer and factory orders. Optional modules include accounts payable, accounts receivable, and general ledger.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $7500 – $20,000
Contact: Matthew B. Brosious
(212) 221–3016
COMPUTER MASTERS INTERNATIONAL CORP.
39 West 38th Street
New York, NY 10018

Inventory

Operating System: VMS
Keywords: • Inventory • Materials handling • Warehousing

This flexible system supplements the product file with a group and a brand file, facilitating extensive and logical reporting. The Inventory system allows multiple branches, and the set-up inventory is automatically duplicated. Valuations are performed based on standard costs, weighted average, or FIFO. Complete audit trails are provided. The system interfaces with Order Entry/Invoicing, Accounts Receivable, and Sales Analysis and forms part of a complete order-processing system.

The Inventory system features multiple branches/warehouses, branch-to-branch transfers, mass inventory loading, purchase order information, on-line inquiry, extensive reporting, and user-maintained options.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $15,000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

Inventory Control

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)

Keywords: • Inventory • Manufacturing • Purchasing

This on-line multiuser UNIX*-based inventory control system maintains stock levels and reorder points and provides usage analysis, inventory valuation, and reorder reports. The system supports multiple units of measure for each inventory item (cases, pieces, and pounds) with automatic conversion. Inventory Control is fully integrated with purchasing, material receipts, and order and shipment processing. The system maintains perpetual on-hand and on-order balances for both purchase and sale items. Support is provided for "ABC" analysis of stock levels, which helps locate over- or understocked items. A subsystem is available to assist in physical inventory. The programs print count sheets and reports that compare theoretical to actual counts and compare theoretical to actual stock levels. The programs allow entry of actual accounts and revised accounts and generate adjustment transactions for variances.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division. Timely information is assured through the automatic updating of G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Inventory/Rentals

Operating System: VMS

Keywords: • Billing • Inventory • Sales analysis

Distribution medium: 9-track 1600 bpi magnetic tape.

This system maintains inventory by serial number and by count. The system handles sales, maintenance, rentals, leases, and demo orders. Initial invoicing is automatically generated at shipment, and repeat billings for maintenance, leases, or rentals are generated monthly. Management maintains control over price and credit approval.

Inventory/Rentals is interactive and also maintains tight controls and detailed audit trails. A high-level report writer generates reports from the data base and audit trails. A 1-minute session enables the user to initiate a report with user-specified sorts, page breaks, titles, selects, and totals. The system is stand alone or is bundled with A/P, A/R, G/L, and payroll. The cost for each transaction is minimized when generating a large number of small monthly invoices.

A version of this product is available for the PDP–11 computer.

Price: $20,000
Contact: Robert Brown
(902) 429–3175
DYMAXION RESEARCH LTD.
Box 1053, Armdale Station
Halifax, Nova Scotia B3L 4L5
Canada

MBS ASR (Manus Business Systems Automatic Stock Replenishment)

Operating System: VMS
Keywords: • Inventory • Purchasing • Warehousing • Wholesale

MBS Automatic Stock Replenishment uses data collected by the (prerequisite) MBS Order Processing and MBS Purchase Order Management modules to calculate suggested stock reorders. The system uses 18 months of order and ship quantity data to classify products based on movement and cost. Once products have been classified, the system will apply one of five ordering algorithms to calculate the proper suggested order quantity. The purchasing manager is then able to order on an exception basis, concentrating on the small number of products for which special knowledge and experience are most important.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $6000
Contact: Gary Vowels
(206) 285–3260
MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

MBS IM (Manus Business Systems Inventory Management)

Operating System: VMS
Keywords: • Inventory • Warehousing • Wholesale

The MBS Inventory Management Module provides the capabilities for effective inventory accounting and control. The module includes functions for maintaining product files for single or multiple warehouses. Inquiry functions provide rapid summary information on inventory

status. A function is available to adjust stock levels through several types of inventory transactions, including physical adjustments, returned merchandise, and interwarehouse transfers. Audit trails allow management to monitor changing stock levels and to guard against erroneous or unauthorized stock access.

Several functions assist in performing physical inventory count. Special functions are available in the module for maintaining item price and cost data over periodic intervals and for having product values automatically updated at predefined dates. Various reports provide useful management tools to help prevent loss of sales due to out-of-stock conditions.

The Inventory Management Module interfaces, through transaction processing, the MBS Order Entry/Invoicing, Purchase Order Management, and General Ledger modules.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $9000
Contact: Gary Vowels
(206) 285–3260
MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

MBS OP (Manus Business Systems Order Processing)

Operating System: VMS
Keywords: • Order entry • Warehousing • Wholesale

This module provides single- or multiple-warehouse order processing operating in pre- and postbilling modes. In a complete system, this module is fully integrated with four other MBS modules: Inventory Management, Sales Analysis, Accounts Receivable, and General Ledger. The module has been successfully installed in low-volume single-warehouse and high-volume (8000+ order lines/day) multiwarehouse environments.

In the prebilling mode, orders are entered with stock volume checking. Picking tickets are directed to a warehouse printer. The open order is maintained until shipping information and picking exceptions are entered, at which time the invoice is generated and back orders are created. When stock is received, back orders can be filled, and a new order is automatically generated. The postbilling mode bypasses the picking ticket production, creating an invoice or memo immediately, with back-order support as needed. Several inquiries give the user complete visibility of orders, back orders, and stock levels.

Reports are provided for status and audit trails. Those reports offer the user sort and selection options. Special functions support interwarehouse transfer of stock.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $15,000
Contact: Gary Vowels
(206) 285–3260
MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

MBS PO (Manus Business Systems Purchase Order Management)

Operating System: VMS
Keywords: • Inventory • Purchasing • Warehousing • Wholesale

This module provides the capabilities for performing all purchasing activities related to an inventory control system. The module includes functions needed to maintain a vendor master file and to prepare purchase orders in an on-line mode for those vendors. All purchase orders issued are retained on file until all the line items ordered are processed. Received merchandise is recorded through receipt transactions and is applied against an open P/O. Back-order information can be generated at receipt entry time, if desired. Receipt transactions for noninventoried items are specially processed so that the receipt of such merchandise can be related back to the original sales order. Several report functions, with varying selection and sort options, provide P/O status and audit trail reporting. A vendor history report shows vendor service performance on a year-to-date basis. Inquiry functions give immediate access to vendor data and to the current status of issued P/Os. In an integrated system, the Purchase Order Management module directly interfaces with Inventory Management.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $9000
Contact: Gary Vowels
(206) 285–3260
MANUS SERVICES CORP.
1700 Westlake Avenue North
Seattle, WA 98109

MDS–3WDS (Wholesale Distribution System)

Operating System: MicroVMS, VMS
Keywords: • General ledger • Inventory • Report writer • Wholesale

Distribution medium: magnetic tape.

This system supports multiple currencies and languages and is ideal for distributed or centralized environments in which direct order-entry devices are required by customers, outside salespeople, and remote branches. The system can interactively scan an unlimited number of stocking locations for stocked and on-order inventory and can perform

interstore transfers automatically. The system supports multiple costing methods and complex pricing algorithms, maintains a sophisticated back-order system, analyzes limitless amounts of historical data for ROP, SOQ, as well as many other functions. Purchasing can be fully automatic, satisfying vendor standards while analyzing seasonality and trend analysis of inventory.

These packages have been installed in durable and nondurable industries. The unique table-driven software can be enhanced, using fourth-generation products, to meet most requirements.

Price: $100,000 – $150,000
Contact: Ed Katz
(602) 897–9576
SYSTEMS BY MICA, INC.
6101 S. Rural Road
Tempe, AZ 85283

MMS–1 (Material Management System)

Operating System: VMS
Keywords: • Inventory • Materials handling • Warehousing

This low-cost easy-to-use system manages the stockroom, warehouse, toolcrib, or supply center. MMS–1 operates with conventional storage, using racks, bins, shelves, or pallets. MMS–1 will also control automated storage and retrieval equipment, such as miniload stackers and carousels.

MMS–1 provides real-time inventory control through on-the-spot data capture for immediate and accurate inventory of up to 50,000 items. Part-location indexing eliminates searches by providing exact locations for picking or stocking items. Space management automatically assigns free space to new items.

Additional features are cycle audit control for automatic scheduling and recording of progressive inventory counting to eliminate annual shutdown; audit trail reporting for a complete printed log of transactions; and management reporting through attractive screen displays and reports of activity, inventory, and status summaries.

Host computer feedback, label printing for travel tickets and location tags, and AS/RS control are optional.

A version of this product is available for the PDP–11 computer.

Price: $11,000 – $21,000
Contact: Aaron Albert
(212) 695–5001
RGTI SYSTEMS SOFTWARE
1 Penn Plaza, Suite 4835
New York, NY 10119

MMS–2 (Material Management System)

Operating System: VMS
Keywords: • Inventory • Materials handling • Warehousing

MMS–2 provides real-time control of storage and retrieval operations in manual and automated stockrooms, warehouses, and supply centers. MMS–2 provides location assignment and space management in conventional racks, shelves, and cabinets; automated storage and retrieval equipment, such as miniload stackers and carousels; all MMS–1 features; support of multiple users and multiple automated storage machines; kitting control for coordinated picking of orders; bar code reading and printing; and radio-linked terminals for mobile on-board or hand-held use in rack and shelf storage.

MMS–2 tracks back-ordered material and triggers issuing on receipt, sorts bulk storage activities by location, and tracks assignment of those transactions to operators. MMS–2 provides similar work disciplines and information management for manual and automated stockroom areas.

Host computer communications for loading of issue requirements, notification of receipts or new-part definition, and reporting back of stock, pick, and cycle count performance and exceptions are through IBM 3271, 2780/3780, or other protocols.

A version of this product is available for the PDP–11 computer.

Price: $50,000 – $100,000
Contact: Ronald Tepper
(212) 695–5001
RGTI SYSTEMS SOFTWARE
1 Penn Plaza, Suite 4835
New York, NY 10119

OE–11 (Order Entry and Invoicing)

Operating System: MicroVMS, VMS
Keywords: • Order entry • Retail • Sales analysis • Warehousing

Distribution media: 800/1600/6250 bpi magnetic tape, RK07, RL02, RM03, RX50.

This system operates with AR–11 Accounts Receivable to provide an interactive method of entering and processing orders, generating invoices, and analyzing sales. OE–11 features user-designed forms for order processing using user-defined parameter files. Other user-oriented features include:

- User-defined product codes with up to 15 characters and description with up to 120 characters
- An order entry screen that recalls and validates information from customer files, allows hold orders, provides available quantities, and performs immediate pricing

- User-defined order processing requirements that determine what is required before invoicing
- Pricing through four base-price fields or special pricing by contract
- Price changes that may be entered before the actual date of change and applied as of the change date
- Credit memo, back-order, and direct-ship processing
- Price changes allowed during order entry process with passwords and reason codes
- After-the-fact invoicing and customers added during order entry allowed
- Orders tracked through the system with an order status report
- Generic (not inventoried), obsolete, and replaced products allowed
- A password security system
- Interfaces to AR–11 Accounts Receivable and IC–11 Inventory Control; other complementary products include the GL–11 General Ledger, AP–11 Accounts Payable, PY–11 Payroll, FA–11 Fixed Assets, and CN–11 Job Cost systems

OE–11's reports include new orders, master orders, order status, product sales analysis, customer sales analysis, back orders, direct ships, special orders, missed and canceled orders, current prices, historical price changes, and pending price changes. Forms that can be designed by the user include invoices, acknowledgments, picking lists, packing lists, shipping papers, credit memos, new-order information, generic price sheets, and customer price sheets.

The OE–11 user's guide includes information for the office manager, the terminal operator, and the application supervisor. The reference manual provides information on installation procedures, program flows, and data formats for the system manager and programmers.

A version of this product is available for the A-to-Z system.

A version of this product is available for the PDP–11 computer.

Price: $3600 – $12,500

Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

OPRA

Operating System: VMS

Keywords: • Billing • Inventory • Order entry • Wholesale

OPRA provides complete facilities for purchase and sales order processing, goods-in, goods-out, stock control, and invoicing. The system is appropriate for organizations with a significant distribution function — wholesale, retail, manufacturing — and an annual turnover in excess of £5 million. The product is particularly applicable to retail, the wine and beer trade, the clothing trade, and manufacturing

in general. The system interfaces directly with the APRA integrated accounting system. The system features on-line validation, stock update, credit checking, and stock reservation; facilities to handle returned stock, discounts, delivery dates, delivery addresses, and delivery link codes; controlled product substitution; multiple date-related base selling prices for each product; documentation that includes goods-in advices, picking notes, delivery notes, and invoices; on-line confirmation, cancellation, part confirmation of receipts, and acceptance of additional/alternative items; automatic back ordering and order release; repricing of goods not yet delivered; and comprehensive on-line inquiries.

A version of this product is available for the PDP–11 computer.

Price: £11,000 – £18,000
Contact: J. Goldsmith
0252 544321
SOFTWARE SCIENCES LTD.
Abbey House, 282/292 Farnborough Road
Farnborough, Hampshire GU14 7NB
England

ORDENT–IMPRS General Business Order Entry System

Operating System: VMS
Keywords: • Billing • Credit • Inventory • Order entry

This fully interactive, self-prompting system features inventory control, credit limit checking, automatic back ordering, and interactive reporting. Other features include automatic credit-checking authorization, selective back-ordering techniques, generation of picking tickets/invoices/credit memos, on-line O/E editing with error and correction prompts, on-line shipping entry with selective back ordering, overriding out-of-stock conditions, immediate inventory-control allocation functions, flexibility to allow for special pricing and discounting techniques, add-on picking ticket and invoices comments, overriding ship-to address information, and integration with other IMPRS application packages.

A version of this product is available for the PDP–11 computer.

Price: $2000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

Order Entry/Inventory System

Operating System: VMS
Keywords: • Accounts receivable • Inventory • Order entry • Wholesale

The Order Entry System automatically converts shipped orders to receivables. The Accounts Receivable rounds out the Inventory System, informing you of your current receivables.

The Order Entry/Inventory System generates packing slips; enters shipments; performs invoicing; automatically updates inventory; cancels orders and adjusts inventory; covers partial or complete shipments; reports back orders and period-to-date and year-to-date unit sales, dollar sales, and cost figures; generates stock-status reports indicating items that require reordering or are below the minimum/above the maximum inventory level; and provides 10 price lists that can be selected by the customer.

The Order Entry/Inventory System produces packing slips; invoices; cancellation, inventory transaction, open-order (by customer or items), stock-status, and customer-analysis reports; and sales journals.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $20,000

Contact: William R. Paschal, Jr.
(405) 843–7323
DATATEK CORP.
818 N.W. 63rd
Oklahoma City, OK 73116

Order Entry/Invoicing

Operating System: VMS

Keywords: • Accounting • Billing • Order entry • Sales analysis

This flexible system interfaces with Accounts Receivable, Inventory, and Sales Analysis for a complete order-processing system. Optionally, Invoicing is available as a stand-alone system. Pricing and discounts are automatic but can be overridden. The user defines units of measure, applicable taxes, information to be included in the ribbon line of the order/invoice, and add-on charges. Reporting is comprehensive by way of screen inquiries and hard-copy printouts. Complete audit trails are provided. The Order Entry/Invoicing system also features multiple branches, on-line inventory status, on-line inquiry, reporting, automatic back orders, and user-maintained options.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $20,000

Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

Order Processing

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)

Keywords: • Manufacturing • Order entry

This fully integrated on-line multiuser UNIX*-based order processing system provides full support for multiple shipments, partial shipments, and back orders. The programs produce packing lists, shipping labels, order and shipment registers, back-order processing, open-order analysis, and order-status inquiries. The system provides for returns, allowances, adjustments, and items damaged during shipment. Both orders and shipments are immediately posted to Inventory Control. Special forms, such as manifests and bills of lading, can be produced, and programs are available for spread order and blanket order entry. A change-in-status report by item can be produced that shows open orders at start of period, new orders, shipments, and open orders at end of period. That report can be organized by item, by item within customer, or by item within vendor. Future orders may be entered, and stock requirements reports can be printed to assist with long-range manufacturing plans.

Also available are a print key providing hard copy of any screen image through the system printer, true multiuser design for concurrent program use, built-in multicompany/multidivision support, and user-assigned predefined company/division or user-allowed option to specify company/division. Timely information is assured through the automatic updating of G/L from all modules.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

Order Processing

Operating System: VMS

Keywords: • Order entry

This program offers a complete order-processing system.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Andrew Yasenchak
(201) 231–9400
UNITRONIX DATA SYSTEMS, INC.
50 County Line Road
Somerville, NJ 08876

ORDERS Wholesale Distributor System

Operating System: VMS
Keywords: • Order entry • Report writer • Warehousing • Wholesale

This fully interactive on-line system is for the wholesale distributor. An order entry subsystem allows multiple terminal operators to perform order entry directly over the telephone or from order forms. The system provides on-line customer credit checking, automatic back-ordering, and the ability to override credit hold and out-of-stock conditions. The system also allows special pricing and discounting techniques.

The inventory control subsystem automatically allocates inventory during order entry. Inventory management maintains lot history from receipt to deletion, performs requirements forecasting, and reports year-to-date inventory sales histories. The system prints work orders, UPS shipping labels, invoices, and statements.

Accounts Receivable offers billing statements and aged receivables reports as well as daily and monthly status reports to compare sales, profit percentages, and aged total receivables.

The salesperson/commission subsystem tailors commission plans for individual salespeople and produces reports on demand.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $15,000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

Papersoft

Operating System: VMS
Keywords: • Accounting • Inventory • Order entry • Purchasing

This fully integrated interactive system for the wholesale merchant provides order entry with special pricing and amalgamation capabilities, billing, sales analysis, inventory management, accounts receivable, accounts payable, and general ledger capabilities. Papersoft controls multicompany, branch, warehouse, and retailing activities. The system features inventory management techniques to reduce stock-outs and to increase turns and functions to defined service levels and to improve inventory investment decisions. The system automatically checks for credit, automatically generates delivery documents, ships back orders, and fully controls factory-direct shipments. Source code is provided.

A version of this product is available for the PDP–11 computer.

Price: $56,000 – $100,000
Contact: Norman J. Parkinson
(206) 828–6787
THE COMPUTERWORKS, INC.
P.O. Box 70248
Bellevue, WA 98007

Perspective/700 Inventory Management

Operating System: VMS
Keywords: • Bill of materials • Inventory • Order entry • Warehousing

The on-line Inventory system, with Perspective Order Processing and Purchasing, provides the proper balance between inventory and sales.

Any product can be specified for back order. That automatic feature eliminates manual control procedures and helps reduce the number of sales lost because a required back order was overlooked. Perspective/700 Inventory also provides information that helps to decide what you need, when you need it.

This multiuser, multicompany system provides for 36 warehouse locations. A physical inventory subsystem handles inventory automatically. Order Processing allocates inventory while invoicing automatically depletes inventory. The current value of inventory can be automatically calculated. The system can also show the manufacturer's product line. Reports include inventory valuation reports and a warehouse stock status report.

The Inventory system, which interfaces to Purchasing, provides flexible pricing. Up to 36 prices to an item are allowed, as is quantity break pricing. Costing methods include FIFO, average cost, LIFO, standard cost, and current. Prices for inventory items can be updated to reflect current costs while protecting the bottom line of item profitability.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $5000
Contact: Michael B. Andelman, President
(312) 953–2220
LIOCS CORP.
246 E. Janata Boulevard
Lombard, IL 60148

Perspective/700 Order Processing

Operating System: VMS
Keywords: • Credit • Financial analysis • Order entry

This multiuser, multicompany system allows the user to add new customers at order entry or to look up customers by account number, name, or phone number.

Order Entry enables the user to enter orders, credit memos, debit memos, and direct billing for individual customers while creating an open sales orders file for pending customers. Invoices are calculated daily for all sales orders that have been released for invoicing. An optional feature permits purchase orders for drop shipment of non-stocked items to customers to be generated automatically.

When an order is entered, the system immediately checks the stock status of the product. The item is committed, and shipping papers are printed in bin location sequence. Multiple ship-to addresses are allowed. The customer's credit status is also checked at order entry.

Pricing is flexible. Features include 36 price codes, 36 quantity breaks, contract prices, manual pricing, and trade and special discounts.

The Order Entry system automatically updates the Accounts Receivable, Inventory, General Ledger, Order History, and Sale Commissions.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $13,000

Contact: Michael B. Andelman, President
(312) 953–2220
LIOCS CORP.
246 E. Janata Boulevard
Lombard, IL 60148

PIC (Parts Inventory Control System)

Operating System: VMS

Keywords: • Cost accounting • Inventory

This system provides interactive data entry and data base inquiry for parts inventory accounting and control. Labor expense can also be included to produce project cost reporting by a number of categories.

Reports of low stock and reports by vendor, part number, or size can be produced. An audit trail report by work order or by purchase order is available.

Data entry errors are trapped at entry time. Any number of parts can be stored on multiple disks. Reporting across disk files is standard.

A version of this product is available for the PDP–11 computer.

Price: $10,000

Contact: W. G. Welter
(713) 373–1905
ADVANCED MANAGEMENT TECHNOLOGIES
Box 71
Cypress, TX 77429

PICS (Parts Inventory Control System)

Operating System: VMS
Keywords: • Inventory • Management • Materials handling • Warehousing

Distribution media: RL01, RL02, RX01, RX02, magnetic tape.

This system provides a tool for controlling quantities of parts that may be used in equipment maintenance and repair. The system provides reports of current inventory, low-stock items, and low-stock items by vendor. The system also supports other useful functions.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $5000
Contact: Ralph M. Flanders, President
(615) 966–6832
CUSTOM COMPUTER SOFTWARE, INC.
1108 Woodshire Drive
Knoxville, TN 37922

Pioneer COMMAND Inventory Management Module

Operating System: VMS
Keywords: • Inventory • Manufacturing • Warehousing

This module, developed by Pioneer Software International, is interactive, on line, and user friendly and provides complete control of inventory. The module may be installed stand alone or as part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND System is written in BASIC–PLUS–2 and requires a minimum of 64K words. Because the system is based on Userware International's USER–11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The Inventory Management Module operates in a multiple-warehouse environment involving finished goods, subassemblies, components, and raw materials. Various financial and statistical information and up to 24 periods of usage history are retained against each part. Control of parts movements is achieved through an audit trail of all movements, including merchandise received, issued, returned from production, and returned to suppliers. Inventory reordering patterns are parameter driven and depend on which options are selected. This module also offers comprehensive physical inventory procedures, several costing methods, and a variety of screen displays to review inventory balances and movement. Numerous reports are available, including inventory status and valuation, inventory reorder report, ABC analysis, and others. The module automatically interfaces with Sales Order Processing, Purchase Order Processing, and General Ledger.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $6000
Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745–6006
USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

Pioneer COMMAND Purchase Order Processing Module

Operating System: VMS
Keywords: • Accounting • Manufacturing • Order entry • Purchasing

This module, developed by Pioneer Software International, is interactive, on line, and user friendly. The module may be installed stand alone or as part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND System is written in BASIC–PLUS–2 and requires a minimum of 64K words. Because the system is based on Userware International's USER–11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The Purchase Order Processing Module handles all purchase orders and back orders to suppliers and provides a method of receiving and returning merchandise against individual line items on those orders. Extensive facilities are available to allow the addition, modification, and deletion of orders and individual line items on orders. The vendor data base contains details of the contractual terms, including normal discount, contract pricing, and payment terms. A variety of screen displays, providing summary and detailed information, are available for reviewing purchase orders. Numerous reports are available, including purchase order summaries in a variety of sequences, aged purchase order reports, returns, exception reports, and others. The Purchase Order Processing Module automatically interfaces with the Inventory Control, Accounts Payable, General Ledger, Sales Order Processing, Work Order Processing (Production Control), and Material Requirements Planning (MRP) modules.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $8000
Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745–6006
USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

Pioneer COMMAND Sales Order Processing Module

Operating System: VMS
Keywords: • Accounting • Billing • Order entry • Sales analysis

This module, developed by Pioneer Software International, is interactive, on line, user friendly, and part of Pioneer's COMMAND System for Financial Management, Distribution, and Manufacturing. Pioneer's COMMAND System is written in BASIC–PLUS–2 and requires a minimum of 64K words. Because the system is based on Userware International's USER–11 Database Management System, extensive on-line inquiry and ad hoc reporting are available.

The Sales Order Processing module consists of three major components: Order Entry, Invoicing, and Sales Analysis. The Order Entry system provides for a variety of discounting policies that can automatically be used by setting system control parameters. Those can be based on customers, customer groups, products, product groups, or any combination. Discounts applied can be based on percentages or absolute amounts. Discounts given at order entry time can be changed or overridden at any time, even during invoicing. Multiple warehouse or stock locations are supported. Currency conversion is also an option. Invoicing allows direct entry without reference to an open order, as well as invoicing selected or batched open orders. Credits may be entered separately. A variety of screen displays are available to review open-order details. Numerous reports are available, including open orders in various sequences, aged order report, and detailed and summary sales analysis, including sales commissions. The Sales Order Processing module automatically interfaces with the Accounts Receivable, Inventory Management, and General Ledger modules.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $8000
Contact: Jered Cady, Vice President, Sales and Marketing
(619) 745–6006
USERWARE INTERNATIONAL
2235 Meyers Avenue
Escondido, CA 92025

P.M.A. Distribution

Operating System: MicroVMS, VMS
Keywords: • Accounting • Order entry • Purchasing • Warehousing

Distribution medium: magnetic tape.

P.M.A. Distribution has subsystems for sales order processing, purchasing and costing, multicurrency accounting, stock control, and integrated accounts. The system is written in COBOL and operates in a multicompany, multiwarehouse, and interactive mode. Budgetary control and budgetary forecasting modules are featured.

Price: £15,000 – £20,000
Contact: P. Spearing
02934–771361
P.M.A. CONSULTANTS LTD.
Rhodaus House, Victoria Road
Horley, Surrey RH6 7AS
England

Purchase and Supply Control

Operating System: VMS
Keywords: • Inventory • Manufacturing • Purchasing

This system controls the purchasing and stock replenishment for manufacturing and distribution companies. The largest military aircraft manufacturer in Europe uses this system to control an annual expenditure in excess of $2 billion.

A version of this product is available for the PDP–11 computer.

Price: $20,000 – $100,000
Contact: Dr. E. A. Haworth
061 248 7100
MANCOS COMPUTERS
3 Wynnstay Grove, Fallowfield
Manchester M14 6XG
United Kingdom

RAM 12™

Operating System: VMS
Keywords: • Accounting • Inventory • Order entry • Point of sale

This comprehensive, reliable distribution and accounting control system provides interactive on-line information, integrated modules, better control, and increased profitability for the user. Reports can be selectively displayed on a video terminal and/or printed on a system printer. A report is either printed immediately or sent to a disk "spool" file for printing at a later time. Printing starts at any page number, and management reports can be printed many times. Companies and departments can simultaneously use a single RAM 12 system. The sophisticated and flexible password system permits a business to customize its security methods.

RAM 12 is offered as a complete turnkey systems solution and includes training, 800-line telephone support, as well as on-line remote terminal and computer support from IDSC through modem connections.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $30,000
Contact: Robert Thomason
(603) 645–6677
INTERNATIONAL DIGITAL SYSTEMS CORP.
669 East Industrial Park Drive
Manchester, NH 03103

RealWorld Software: Order Entry/Inventory

Operating System: UNIX* (Berkeley, System III, System V)
Keywords: • Inventory • Order entry • Query facilities

This system, developed by RealWorld, has item file maintenance and lists; allows receivings transaction entry and editing and posting with edit list and journal; provides for inventory costing by average cost, LIFO, or FIFO; facilitates order entry and editing, with interactive inventory control during order entry, and order edit list; and allows on-line order status inquiry and 1- and 2-step order processing. The system prints invoices for all orders billed, picking tickets, a price list, and stock status and purchasing advice reports and handles credit memos.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $850 – $1250
Contact: Vern Pang
(714) 978–1212
INFORMATION MANAGEMENT ASSOCIATES, INC.
1437 W. Palmyra
Orange, CA 92668

REPFAX (Food Broker System)

Operating System: VMS
Keywords: • Accounts receivable • Order entry • Retail • Wholesale

The REPFAX Broker System is designed for food, health and beauty aids, and general merchandise brokers and provides the following:

- Order processing: The manufacturer's catalog data is prestored in a master file. Price, policies, minimum-order requirements, promotional allowances, and shipping information are automatically applied to each order. Salesman's Price Books contain all order information, plus effective dates and details of upcoming promotions. As promotions become effective or end, prices and terms are automatically changed.
- Brokerage: On-demand status analysis of each principal's account.
- Sales and promotion tracking: On-demand inquiry/reports on the effectiveness of products, promotions, salespeople, and principals.
- Spoils accounting: Entering each spoils certificate generates detailed invoices for principal and credit memos on a store-by-store basis.

- Retail reporting: Survey reports of current shelf plan, customer by customer, are customized for each user and include comparisons of proposed, to present, to previous surveys by buyer and manufacturer, plus specific deficiencies within each store.

REPFAX is integrated into DIBS–11 and MCBA G/L, A/P, and Payroll.

A version of this product is available for the PDP–11 computer.

Price: $13,500 – $17,500
Contact: Nick Culbreth
(404) 256–3067
AMERICAN DIGITAL PRODUCTS CORP.
5775-B Glenridge Drive N.E., Suite 320
Atlanta, GA 30328

Sales Analysis

Operating System: VMS
Keywords: • Sales analysis

This easy-to-use, user-maintained system with on-line inquiry capabilities is an integral part of the order-processing system and interfaces to Order Entry/Invoicing and Inventory systems. This extensive reporting Sales Analysis system contains summary or detailed reports and comparisons to prior periods.

Breakdown for product sales analysis is done by product, by group, and by brand, whereas customer sales analysis is done by salesperson, by location, and by customer class. Exception reporting by product and by customer provides information based on user-defined parameters.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $8000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

STRADIS

Operating System: VMS
Keywords: • Simulation • Warehousing

This interactive modeling system, developed by Unilever, enables distribution planners to simulate complex distribution networks from products to customer. STRADIS includes interfactory and interdepot movements by a variety of user-specified transport modes. Alternative strategies can be rapidly evaluated, using realistic cost and resource functions for both facilities and transport. The resources and costs associated with multidrop load delivery are accurately represented. The system generates full cost and flow information for each chosen

configuration and demand level. Thus, product and customer profitability can be calculated by area and budgets and tariffs evaluated. The user can amend STRADIS suggestions and query the system, using a variety of reports.

A version of this product is available for the PDP–11 computer.

Price: £22,000
Contact: Bob Blightman
(+44) 784 34411
P–E INFORMATION SYSTEMS LTD.
Park House, Wick Road
Egham, Surrey TW200HW
United Kingdom

TBS Order Entry System with Inventory Control, Billing, and Sales Analysis

Operating System: VMS
Keywords: • Billing • Inventory • Order entry • Sales analysis

TBS Order Entry features on-line entry of orders and CR memos, permits items to be partially back ordered and partially shipped, automatically extends prices and calculates tax and weight, produces picking tickets for each order, maintains separate ship-to addresses, and changes or deletes orders automatically to adjust inventory. The system also prints a daily order log, open-order analysis reports, and back order analysis reports, all by customer number or product number.

The Billing software selects invoices for printing, adjusts quantity ordered and shipped in the invoice preparation program, provides interface for invoices and CR memos to A/R, and prints the invoice register.

The Inventory Control software provides an on-line update of the product file, which contains a 10-character product number, three prices, average cost, QTY on hand, QTY on order, QTY RES, QTY BO, EOQ, ROL, and much more; prints the daily inventory activity register; and prints the purchase advice report and the price list.

The Sales Analysis software produces five reports.

A version of this product is available for the PDP–11 computer.

Price: $995 – $2500
Contact: Chuck Tebbetts
(818) 242–7981
THETA BUSINESS SYSTEMS
1110 Sonora Avenue, Suite 106
Glendale, CA 91201

Thoroughbred Order Processing

Operating System: VMS

Keywords: • Data base management • Inventory • Order entry

This system's Master Inventory File can provide up to 999,999 inventory items. Instant order and inventory information is available at a terminal or on hard-copy printout. Inventory information, including sales, costs, and reorders, is automatically updated in the Inventory Master File. Instant updates of on-hand and committed quantities are provided to prevent overshipment.

The system accommodates costing, entry, and shipment of noninventory items; provides complete tracking of in-stock, on-order, and back-ordered inventoried items; and automatically maintains stock-item history. The physical inventory subsystem provides forms for physical inventory and updates inventory files. Returned goods are processed automatically. The system maintains five warehouses; offers automatic or manual back-order reporting, processing, and release; and accommodates order cancellations, order changes, and partial shipments. Costing methods include market, weighted average, and LIFO/FIFO.

The system provides six levels of multipricing by customer, item, and category. Automatic markup pricing is available, as is selective pricing by customer. Optional cash sales processing with invoice printing is available. The system prints multiple-page invoices, sales orders, and shipping forms. On-line credit checks can be made during data entry. User-defined messages can be printed on invoices and sales orders. Automatic calculation of state sales tax is provided. The system provides totals for month-to-date billing and booking. Commissions can be determined by item or by salesperson.

The system automatically produces sales commission reports; provides open-/back-order status reports and automatic credit exception reporting; and automatically generates sales analysis reports, including customer item, class, sales representative, and invoice summaries, and inventory reports by status, activity, committed, critical, movement, price, warehouse, and customer contract. Optional general ledger and accounts receivable interfaces and automatic audit trails are provided.

A version of this product is available for the PDP–11 computer.

Price: $795 – $8000

Contact: Adrienne H. Webb, Sales Manager
(415) 798–0240
COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

Thoroughbred Purchase Order

Operating System: VMS
Keywords: • Data base management • Data dictionary • Purchasing • Query facilities

This system features easy entry and verification of purchase orders; purchase order query and reporting by vendor, item number, or purchase order number at the terminal or as a hard-copy printout; automatic purchase order updating; multiple-page purchase orders; control of stock receipts and incomplete purchase orders; automatic adjustments of variance in purchase price; automatic unit conversions; flexible ship-to instructions; automatic generation of Vendor Master File Report; inventoried and noninventoried item ordering; optional interface with Accounts Payable; and automatic audit trails.

A version of this product is available for the PDP–11 computer.

Price: $795 – $8000
Contact: Adrienne H. Webb, Sales Manager
(415) 798–0240
COMPUTER SYSTEMS DEVELOPMENT, INC.
300 Ellinwood Way, Suite 160
Pleasant Hill, CA 94523

Tire Dealer (Complete Inventory Control)

Operating System: VMS
Keywords: • Inventory • Order entry • Purchasing • Sales and marketing

This stand-alone inventory control system contains the functions required to keep records for a multiple-location tire company. The system allows inventory to be costed at both a regular average cost and a special cost, along with a complete sales history for each month of the year.

This system includes purchase order control, inventory receipts, inventory adjustment, a sales journal, and a complete physical inventory subsystem. A stock status list, a slow-moving-items list, an inventory valuation, and a stock movement report, along with complete dollar and unit sales, are included reports.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $10,000
Contact: Nigel Harris
(613) 829–8888
HARRIS COMPUTER SYSTEMS
16 Credit Union Way
Nepean, Ontario K2H 8R6
Canada

TOLAS

Operating System: VMS
Keywords: • Inventory • Manufacturing • Order entry • Purchasing

This comprehensive package for distribution and light manufacturing industries provides a complete multifunction, multiuser business system. Installations may run from 10 to more than 90 interactive terminals and may perform batch processing and program development or maintenance concurrently with on-line operations. TOLAS offers ease of operation, improved operator efficiency and accuracy, extensive on-line edit checking, formatted CRT screens, consistent logical flow across functions, and numerous accounting controls and audit trails.

TOLAS consists of eight application modules: Order Entry and Invoicing, Inventory Management, Accounts Receivable, Sales Analysis, Purchase Order Management, Accounts Payable, Financial Reporting, and Fixed Assets Accounting. Additional modules available are Work Order Processing and Equipment Sales and Rental Reporting.

Information from the Financial Reporting System can be passed directly to financial analysis and modeling packages on either the mainframe or microcomputers. Special functions, known collectively as "Salestream," allow a centralized TOLAS data base to be accessed remotely by customer, vendor, or salesperson terminals. More than 300 business functions are represented in the standard package. Modules may be installed separately or combined to form an integrated system.

Although TOLAS can be installed as a complete off-the-shelf system, it is typically customized by Transcomm to fit a customer's unique business environment and can easily be expanded to meet growing EDP needs. That flexibility is achieved through several report and inquiry generators and by the use of modular programming techniques.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analysis and custom specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $20,000
Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TOLAS–IM (Inventory Management)

Operating System: VMS
Keywords: • Inventory • Production control • Report writer • Warehousing

This on-line interactive system with multilocation capabilities for distribution companies provides inventory status information through on-line inquiries and hard-copy reports. Information on each item is maintained for on-hand, on-order, committed, and back-ordered quantities, along with sales, demand, and lost sales by location. Cost is maintained by standard replacement, LIFO, or average by warehouse. Physical inventory processing provides periodic status verification. If Inventory Management is interfaced to Purchasing, stock reorder processing can provide a recommended order report that can create purchase orders for each vendor by warehouse. Price/cost updating can be performed on individual items or from vendor-supplied magnetic tapes. The Inventory System can be integrated with other TOLAS modules, including TOLAS–Salestream for remote salesperson, customer, and vendor input and inquiries. A special VAX-to-PC interface can transfer either raw or processed data from TOLAS files to personal computers for analysis, reporting, and graphing by LOTUS 1,2,3 or other MS–DOS–based software. TOLAS Inventory Management is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $8500 – $17,000
Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TOLAS–OE/I (Order Entry/Invoicing)

Operating System: VMS
Keywords: • Billing • Order entry • Sales analysis • Warehousing

This on-line order entry and invoicing system for multilocation distribution companies provides high-volume sales order processing and billing operations. Orders are entered interactively, and customer information, credit status, and inventory availability are verified. The system calculates prices using a table-driven matrix pricing

algorithm, processes kit sales, and prints picking documents in the appropriate warehouse. Exception-shipping entry speeds the invoicing process. Open orders, back orders, and invoice detail are maintained for inquiry and reporting. The system provides multiple security arrangements and parameterized programming techniques. Order Processing can be integrated with other TOLAS application modules, including TOLAS–Salestream for salesperson, vendor, and customer remote input and inquiries. A special VAX-to-PC interface can transfer either raw or processed data from TOLAS files to personal computers for analysis, reporting, and graphing by LOTUS 1,2,3 or other MS–DOS–based software. TOLAS Order Entry/Invoicing is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $10,500 – $20,000

Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TOLAS–PO (Purchase Order Management)

Operating System: VMS

Keywords: • Inventory • Purchasing • Sales analysis

This on-line system for purchasing in multilocation distribution companies defines various purchase orders through parameterization coding, maintains current information for status reporting and expediting, and uses exception-receipt entry to update information with minimal operator response. Purchase Order Management creates purchase orders and receipts of noninventoried items and generates stock orders if interfaced to TOLAS Inventory Management. Information is available through on-line inquiries or hard-copy reports. Purchase order control is provided through audit trails and a daily receiver report detailing all receipt transactions. The system can be integrated with other TOLAS application modules, including TOLAS–Salestream, to allow selected vendors direct access for inquiries and input. A special TOLAS-to-PC interface can transfer either raw or processed data from TOLAS files to personal computers for analysis, reporting, and graphing by LOTUS 1,2,3 or other MS–DOS–based software. TOLAS Purchase Order Management is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $8500 – $17,000
Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TRIMS (Tire Dealers and Retreaders Information Management System)

Operating System: VMS
Keywords: • Accounting • Automotive • Inventory • Point of sale

This complete inventory control, accounting, and point-of-sale system for the independent tire dealer has modules for inventory control, invoicing (including point of sale with on-line inquiry by tire size), accounts receivable, sales analysis, accounts payable, general ledger, payroll, purchasing, and report generation. The programs are interfaced and provide for data security. Program highlights include pre- and postbilling capabilities (including point of sale), on-line order entry and editing, trade-ins, automatic back-order processing, product pricing with multiple quantity-level price breaks, group price changes by product type, customer trade discounts, national account billing, claims and adjustments tracking, sales tax exempt/computed status by customer with automatic sales tax computation, intercompany stock transfers, automatic purchase order generation and receipting, balance-forward and open-item customers, and futures (split billing).

The system performs cash-requirements report analysis by vendor; user-formatted financial statements, including a balance sheet, financial statement with budgets (P&L) and last-year comparatives, individual financial statements by profit center, and total company financial statements.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $30,000
Contact: Dane Petersen, Marketing
(206) 453–1320
COMPUTERS NORTHWEST, INC.
14711 N.E. 29th Place, Suite 110
Bellevue, WA 98007

UDS Order Processing

Operating System: VMS

Keywords: • Inventory • Order entry • Point of sale • Sales and marketing

This series of programs gives you control over your customers' orders, from the time they are entered until they are shipped and closed. The order entry sequence directs the entry of the order, checks customer credit and stock availability, and prices the order commensurate with the quantity ordered. The system allows multiple shipment quantities and dates; prints an order entry log, acknowledgments, and packing lists; and updates the product file with booking information. When an order is shipped, a canceled order register, invoice cost register, and invoices are printed. Orders on the books may be aged by item and printed by customer or by job number. Back-ordered items are referenced and returned to the open-order file. Open orders may be referenced for a customer by CRT. Delinquent items are printed on a priority checklist, so that no item is overlooked.

If used with other modules, Order Processing can update sales records and sales and accounts-receivable accounts in the general ledger, post salesperson commission records, post invoices to the accounts receivable file, and update the sales region file, as well as keep track of each item shipped and the customer to whom it was shipped. This module gives you the status of every order and has a direct link to the customer master and finished-goods modules.

The customer master module lets you keep track of average payment time, last payment time, credit line, credit status, highest credit, terms, open accounts receivable balances, SIC listings, bookings, and sales (for the previous year and the year to date).

The finished-goods module describes items and lists supplier numbers, reorder points, backlog of orders, quantity of order, due date, beginning inventory, present stock level, and up to 10 prices and price breaks. This module also contains the booking sales and cancellation and return data used by the sales analysis module.

The sales analysis and commissions module allows you to analyze sales by bookings and shipments by week, month, and year. The module keeps payable commissions on a file, which is updated automatically from accounts receivable and order processing. The module also clears those commissions from the file and produces a report by salesperson, by region, showing sales, bookings, and sales quotas by the month, previous year, and year to date. The module can also clear weekly, monthly, and yearly accumulators from the module.

A cost-of-goods sold report shows the cost of each item sold, based on a standard cost obtained from the finished-goods master file. Those costs may be adjusted prior to printing a final report. A franchise tax data file, which is updated automatically from order processing, produces a franchise tax report. A sales tax file is updated automatically from

order processing and produces a report of items with sales tax. A product sales history report provides a listing either by product or by customer of each item sold, to whom, how many, what price, and when.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $5500
Contact: Zane R. Oaks, Marketing Manager
(513) 890–1800
PROJECTS UNLIMITED, INC.
P.O. Box 14538
Dayton, OH 45414

Warehousing/Order Entry/Inventory/Purchasing

Operating System: VMS
Keywords: • Inventory • Order entry • Purchasing • Warehousing

The ADD Warehouse Distribution system is a complete order entry/invoicing/inventory and purchase order system designed to meet the needs of a wide variety of TBA, motor, and lube oil distributors, as well as general warehouse operators. This full inventory management system allows multiple warehouse locations; inventory valuation based on FIFO or LIFO methods; cost, profit, and reorder analysis; and more. The order entry module ensures automatic and accurate pricing based on practically any volume or special discount structure, optional generation of picking lists, truck loading tickets, bills of lading, and invoices. Orders remain open until delivery, when adjustments and returns can be included. Point-of-sale applications are handled easily by allowing automatic generation of invoices at order entry time. The purchase order control module automatically produces purchase orders based on user-defined reorder points and/or sales history; when goods are received, they are automatically updated into inventory, and exception reports are generated if necessary. In addition, the system is fully integrated with ADD's Accounts Receivable package for credit control and more.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $15,000
Contact: Bruce A. Bott, President
(201) 584–4026
ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

WDS/2 (Warehouse Distributor System)

Operating System: VMS
Keywords: • Accounting • Inventory • Order entry • Warehousing

Distribution medium: 9-track 1600 bpi magnetic tape.

This fully integrated package for heavy-duty parts distributors includes order entry, point-of-sale invoicing, service shop billing, inventory control, kit building and explosion, core accounting, customer price control, sales and profit analysis, back-order and special-order control, purchasing, accounts receivable, accounts payable, payroll, and general ledger. Special features of the system include automatic cross-referencing from old or competitive part numbers to the current part number in use, on-line substitution of an almost unlimited number of part numbers, automatic filling of back orders and special orders, and automatic customer pricing with the ability to "lock" special discounts into the system by specific vendor or by part number.

WDS/2 supports multiple branches and multiple companies on the same computer system. Each branch can view and order inventory from every other branch. The purchasing module allows the home office to control purchases by vendor and, if desired, to force branches to obtain their merchandise from the company warehouse.

WDS/2 is written in BASIC–PLUS–2 and uses the RMS–11 Record Management System.

A version of this product is available for the PDP–11 computer.

Price: $25,000 – $50,000

Contact: J. Richard Schien
(217) 854–4721
KARMAK SOFTWARE & COMPUTER SERVICE
550 North Broad
Carlinville, IL 62626

Welding Distributor System — TIMS BASIC+, 2 + 2, and Super+

Operating System: VMS

Keywords: • Accounts receivable • Inventory • Order entry • Purchasing

The Welding Distributor System combines small-parts (supplies) inventory, cylinder inventory control, and accounts receivable systems. Because of the modular design of the programs, the small-parts inventory system is optional.

Customer Account Inquiry displays financial and cylinder activity. The customer can be accessed by name or account number. Cylinder Inquiry provides a method of researching the status of cylinders maintained by serial number.

A sales tax code file automatically calculates sales taxes when orders and cash sales are entered. Extensive sales tax reporting features are provided at state, city, and county levels. Cash sales are entered separately from charge transactions. The cash sale program allows for the entry of cylinder records, which permits the customer's file to be updated for rental or demurrage.

The system can handle balance-forward and open-item-type customers. Orders — or charge invoices, if the small-parts inventory system is not to be used — can be entered, as well as shipping/returning cylinders in the same process. Open orders may be queried, added to, changed, or deleted prior to billing. Changes to line items or cancellations automatically result in adjustments to inventory. Noninventory sales and debit or credit memos are entered through regular sales entry and editing. The system prints the Sales Journal, including credit and debit memos.

The system allows interactive entry and editing of cash receipts. Non-A/R cash received may also be entered through cash receipts. A general ledger account number must be entered to indicate distribution.

The purchasing module provides for state-of-the-art forecasting tools: graphics demand forecasting with the ability to employ what-if analysis based on simple moving average, weighted moving average, exponential smoothing, and time-series analysis forecasting of EOQ and reorder point calculations. Consideration is given to the cost of holding and of ordering inventory, cost of lost sales, and time to deliver. Other important tools, such as standard deviation, increase the value of this important management resource.

Other systems include BARZ for tracking cylinders by serial number. This technology provides an efficient and reliable method of asset management, as well as cylinder maintenance management.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $50,000
Contact: Stan Hoggatt, Market Manager
(406) 652–2620
COMPUTERS UNLIMITED
2407 Montana Avenue
Billings, MT 59101

Wholesale/Liquid Product Inventory

Operating System: VMS
Keywords: • Billing • Inventory • Petroleum • Wholesale

This system provides complete product control from purchase to sale. Inventory is tracked by storage location, by vendor, and by transportation vehicle (truck, barge, ship, and so on) with true, layered FIFO costing. "Throughput" and "exchange" agreements are easily monitored, including temperature-corrected gallons. Sales are easily posted to this system, which allows for a highly sophisticated pricing structure, including freight charges; temporary and voluntary allowances; and federal, state, and municipal taxes, including gross receipt taxes, prompt pay discounts, and more.

A history of price and discount changes is maintained, thus allowing back-posting of deliveries without looking up previous price data. Also, future price changes may be entered. The system interfaces with the ADD Accounts Payable and ADD Fuel Oil Accounting systems to prevent inventory/billing (payables) mismatches and to track retail disposition of product, respectively.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $20,000

Contact: Bruce A. Bott, President
(201) 584–4026
ADVANCED DIGITAL DATA, INC.
354 Route 206
Flanders, NJ 07836

Wholesaler's Software System

Operating System: VMS

Keywords: • Billing • Order entry • Point of sale • Wholesale

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This system is built around entry and invoicing systems. A customer number is entered, and the name and address are displayed for verification. Then products and quantities are entered. Prices need not be entered; they will be automatically picked up from the product master file. After orders have been entered, a picking list is produced. The list sorts products and quantities ordered by a zone code. Orders are picked and the invoice correction program is run, which allows changes in quantities or products to be made. Lines may be added or deleted. Out-of-stock items may be back ordered or canceled, or substitutions may be made.

The invoice printing program produces the corrected invoices, extends and foots all the invoice lines, and automatically calculates sales tax. Past-due customers are flagged and will not continue without override authority. That also relieves inventories, updates accounts receivable data, and collects data for various reports to be generated later. The system also contains an over-the-counter sales program and a program to enter cash receipts, adjustments, discounts, and merchandise returns.

Pricebooks, inventory status reports, inventory evaluation, product movement, gross profit reports (by product, customer, and salesperson), sales analysis, and accounts receivable information are produced. Customer statements are produced bimonthly. To save expensive statement forms, statements for customers with zero credit balances are

printed on stock paper and kept for the company's records. Those statements are not mailed to the customer. An aging report is printed with each statement run.

A version of this product is available for the PDP–11 computer.

Price: $24,000 +
Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Wine and Beverage Distribution System

Operating System: VMS
Keywords: • Accounts receivable • Inventory • Order entry • Sales analysis

This comprehensive accounting system for wine, spirit, and beverage distributors is written in DIBOL and consists of the following modules: Customer Order Processing/Billing, Accounts Receivable, Inventory Management, Sales History, and Analysis. The system features on-line entry and editing of customer orders, allocation of inventory items, and credit checking; supports distribution from multiple warehouses and multiple price levels, including post-offs; reports sales distributions; prints future orders and back-order reports; maintains inventories by both cases and bottles (inventory items may be vintage specific); has full item description (bottle size, bottle measure, description, and vintage); provides physical inventory cycle counting; prints state gallonage reports; and prints depletion reports by customer, item, brand, salesperson, and territory.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $30,000
Contact: Bruce Rich
(203) 269–6008
WORLDWIDE DATA SYSTEMS, INC.
100 South Turnpike Road
Wallingford, CT 06492

XK–11

Operating System: MicroVMS
Keywords: • Accounts receivable • Inventory • Order entry • Wholesale

Memory required: 64K. Distribution media: RL01, RL02.

This on-line system, written in DIBOL, maintains customer history. The system includes inventory, accounts receivable, and order entry. Customizing is available.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $25,000
Contact: Dr. Ralph Keul
(515) 289–2403
COMPUTER ADVICE, INC.
7372 N.W. 21 Street
Ankeny, IA 50021

Earth Resources

Camerique

ABC/Gas

Operating System: MicroVMS, VMS
Keywords: • Decision support • Pipeline simulation • Production control

Memory required: 120K minimum.

ABC/Gas, written in COBOL and FORTRAN, is a generalized model to fit any gas company. This decision aid enables managers to try alternative strategies covering firm and interruptible supplies, storage and peak-shaving, and firm and interruptible markets without risk, prior to making long-term commitments or short-range dispatch decisions. The model develops an optimum gas market–supply dispatch for each set of input data conditions and computes the resulting economic consequences. The system can answer an unlimited number of what-if questions, such as the following:

- What mix of pipeline gas, peak-shaving, storage, winter service, and SNG and LNG supplies will maximize the gross profit margin?
- How much future gas supply will be economic to contract for, given a range of growth prospects and prices?
- How will customers be affected by new gas decisions, and what is the impact of incremental pricing?
- What will be the deficiencies of firm and interruptable sales under various weather conditions?
- Will there be unsold surplus or take-or-pay penalties?
- How should storages and peak-shave plants be dispatched day by day and during the winter season?
- What additional peak-shaving or storage, if any, is desirable?
- What impact will growth have on the cost of service?

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: V. W. Ruskin
(604) 682–3808
ABC MANAGEMENT SYSTEMS INC.
805 Dupont Street, Suite 3
Bellingham, WA 98225

AIMS III (Advanced Interpretive Modeling System)

Operating System: VMS
Keywords: • Geoscience • Petroleum • Simulation

This system simulates the propagation of energy travel through a model description in the form of horizon depths or travel times, interval velocity, and density. AIMS then generates a synthetic seismic profile, taking into account amplitude effects. In an interpretive situation, the profile can be compared with the original seismic profile by the interpreter. Adjustments can be made to the model and the process repeated until the interpreter feels that the subsurface characteristics that account for the original profile are adequately simulated.

AIMS's capabilities include direct hydrocarbon detection, structural confirmation, integration of geophysical and geological interpretation, detailed prospect evaluation, research and development studies, integration with seismic acquisition and processing, offset ray tracing, fast wave theory approximation, mode conversion loss accounting, velocity contour display, and single trace module.

AIMS offers both ray trace and wave theory (Kirchhoff integral) simulation algorithms. AIMS can be helpful in the investigation of complex structural problems and/or amplitude anomalies, as well as research interpretation, data processing, and data acquisition.

Price: Available upon request
Contact: Harry Cunningham
(713) 627–7180
GEOQUEST INTERNATIONAL, INC.
4605 Post Oak Place, Suite 130
Houston, TX 77027

B–MAP™

Operating System: VMS
Keywords: • Geoscience • Mapping

This system produces a fully annotated basemap containing posted shotpoint and well locations, land grid networks, geomorphic and cultural data, lat/long border, title block, bar scale, direction arrow, and more. Coordinate transformations are used to handle data of different scales and projections. Seismic lines are named and selected shotpoints annotated. Z–MAP contours are automatically scaled and scissored to fit in the map border.

In Canada, contact Brian Thomas, Virtual Computing Services, Ltd., 801 6th Street, S.W., Suite 215, Calgary, Alberta T2P 3VA, Canada (403) 266–7440.

In England, contact Jeff Donze, IPEC, 18 Hanover Square, London W1A 2BB, England 441–493–2061.

In Indonesia, contact Robert Capstick, Delta Computer Services, c/o P. T. Alton Nusantara Jaya, P.O. Box 18/JKWK, Wisma Kosgoro, 53 Jln. M.H. Thamrin, Jakarta 10350, Indonesia 62–323410.

Price: Available upon request
Contact: Donald A. Flanagan
(512) 441–5697
ZYCOR, INC.
2101 South IH–35, Suite 306
Austin, TX 78741–3818

BETA II

Operating System: VMS
Keywords: • Petroleum • Simulation

This black oil simulator numerically simulates 3-dimensional, 3-phase flow in hydrocarbon reservoirs. The program solves black oil reservoir problems ranging from individual well behavior (coning simulations or well test analysis) to large, multireservoir fields. To complement the 3-phase simulation capabilities, BETA II contains two distinct segments of code designed specifically for optimal solution of water-oil and gas-water 2-phase problems.

BETA II has free-field data input. Special array- and table-handling procedures greatly simplify data preparation and help eliminate errors. Well control options are provided to simplify the specification of reservoir operations. Output of calculated reservoir performance may assume various user-controlled forms.

Price: Available upon request
Contact: Marketing Vice President
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

COMP II and PVT

Operating System: VMS
Keywords: • Petroleum • Simulation

This numerical reservoir simulator for the analysis of multicomponent flow in hydrocarbon reservoirs solves problems ranging from depletion or cycling of volatile oil and gas condensate reservoirs to miscible flooding operations involving either outright or multicontact miscibility.

COMP II solves a set of mass balance equations written in finite-difference form for each of a number of grid blocks representing a reservoir. The equations include a mass balance for each of n hydrocarbon components and one mass balance for water. The model formulation is implicit in pressure and explicit in saturations and compositions (IMPES). A stabilized IMPES option allows large time step sizes for problems that are subject to IMPES instabilities.

COMP II uses a generalized cubic equation of state (EOS) for phase equilibrium and fluid property calculations. The generalized EOS reduces to any of the Redlich-Kwong, Soave-Redlich-Kwong, Zudkevitch-Joffe-Redlich-Kwong, and Peng-Robinson EOS. The EOS formulation provides consistency and smoothness as gas and oil phase compositions, and properties converge near a critical point. The use of a single equation to determine fluid properties in COMP II provides a significant technological advantage over the use of correlations to determine phase properties.

PVT, a companion program, is available for the calculation of EOS constants that result from matching laboratory fluid data. The use of those EOS constants in COMP II provides accurate PVT representation for conditions of immiscibility, multicontact miscibility, and outright miscibility.

One important feature of the PVT program is its nonlinear regression capabilities for matching data for black oils, CO_2 swelling tests, gas condensates, multistage flash separations, and near-critical constant composition expansions. This regression capability improves on the trial-and-error procedures in use today and results in enormous savings.

Price: Available upon request
Contact: Marketing Vice President
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

Dispatch

Operating System: VMS
Keywords: • Mining • Simulation

This completely integrated custom hardware and software system controls mining operations. The system uses custom-built microprocessor-based equipment to gather data and communicates by voice-grade radio to the VAX 11/780, which processes and reports data. Custom Dispatch software mathematically optimizes dispatching decisions to provide the highest possible production from haulage equipment. Dispatching decisions are communicated to equipment operators in real time through radio. A complete mine simulator is included to evaluate mine engineering decisions.

Price: Available upon request
Contact: Michael J. Arnold
(602) 746–9127
MODULAR MINING SYSTEMS, INC.
1210 E. Pennsylvania Street
Tucson, AZ 85714

Dry Gas Model

Operating System: VMS
Keywords: • Geoscience • Petroleum • Pipeline simulation

Dry Gas Model (Steady-State Transmission and Network Model) allows the user to simulate the behavior of steady-state flow of natural gas in complex pipeline networks. The model readily handles compressors, pressure regulators, pipeline loops, and other pipeline components. The flexible manner in which gas supply sources and gas sales volumes may be specified provides the user with a virtually unlimited

gas transmission planning tool for evaluating the throughput capabilities of an existing or planned pipeline system. This evaluation in turn leads to the consideration of design alternatives, such as compression and pipeline loop combinations throughout a system.

The model can also be used to determine the effect of adding new sources, whether they be fields in the case of a transmission system or wells in the case of a network system. The program can be used to pinpoint bottlenecks in existing systems or possible bottlenecks in planned systems.

Price: Available upon request
Contact: Facilities Marketing Manager
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

DYNAFLEX

Operating System: VMS
Keywords: • Engineering • Flow analysis
• Pipeline simulation

This comprehensive structural analysis program, an engineering tool for modeling and troubleshooting piping systems, uses common piping terms to model components and loads to produce quick, accurate results. While the program's stiffness method has long been available to engineers, DYNAFLEX's input processing clearly tailors the program for today's piping engineer.

DYNAFLEX offers system design and code compliance analysis. The program aids in the selection of proper pipe sizes and configurations by means of both static and dynamic analyses and also locates and sizes spring hanger supports. For code compliance, the guidelines of ASME, ANSI, NEMA, and API are included. DYNAFLEX ensures that piping loads are within code-defined allowable limits by conducting a stress analysis of the piping system. Pumps, compressors, turbines, and flanges can also have their stresses checked.

DYNAFLEX may be used for the design of refineries, petrochemical plants, chemical plants, power plants, pulp and paper mills, breweries, pipelines, or any other piping systems.

Price: Available upon request
Contact: Pipeline and Facilities Marketing Manager
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

ELAS (Earth Resources Laboratory Applications Software)

Operating System: VMS
Keywords: • Geoscience • Statistics

ELAS is a geo-based information system for analyzing and processing digital imagery data. ELAS processes remotely sensed scanner data, especially the multispectral data acquired by the various NASA Landsat satellites. In addition to Landsat multispectral data, the ELAS system supports the processing of other data, such as aircraft-acquired scanner data, the Return Beam Vidicon (RBV) data from Landsat satellites, digitized topographic data, and numerous other ancillary data, such as soil types and rainfall information, that can be stored in digitized form. As an integrated image-processing and data base maintenance system, ELAS offers the user of remotely sensed data a wide range of easy-to-use capabilities in the areas of land-cover analysis.

The ELAS system has an operating subsystem and a collection of application modules. The operating system handles the required input/output functions, system control functions, and the swapping in and out of applications modules as they are needed. The versatile operating subsystem and the application modules allow the user to perform land-cover analyses, as well as data base construction and manipulation.

The available ELAS capabilities include derivation of training statistics; classification of data, using a maximum-likelihood scheme; registration of an image to an image; numerous image data display capabilities; manipulations with polygons that define areas within the data; implementation on a point-by-point basis of algorithms coded in a programmable calculator-type instruction set; and the regression, correlation, and other statistical analyses of the multivariate data sets. New applications modules can be easily integrated into the system.

Price: $3775
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

EMIS™ (Environmental Mapping Information System)

Operating System: VMS
Keywords: • Data base management • Graphics • Mapping • Statistics

Memory required: 0.5MB. Distribution media: magnetic tape, RC25.

EMIS, written in FORTRAN–77, provides the features and functions of both automated Mapping Information Management Systems (MIMS) and Geographic Information Systems (GIS). EMIS combines Synercom's INFORMAP® II mapping graphics and data base management software and an enhanced version of the Harvard Computer Graphics Laboratory's ODYSSEY software. That convergence has produced a highly advanced cartographic-quality geographic information management system for the geographic information management needs of municipalities, natural resources agencies, pulp and paper companies, land-management concerns, utilities, oil companies, and government agencies.

INFORMAP II, the foundation of the EMIS system, permits the user to create digital maps and to manage and analyze their content. INFORMAP II embodies those functions in a single, unified package. The graphics capabilities convert the map data into digital form; the data base management capabilities provide the means to store and organize that information — the way that the records, map layers, symbols, and other data are managed and interconnected. ODYSSEY adds such geographic and topological capabilities as generating 2- and 3-dimensional thematic maps, polygon processing, overlay analysis of multiple coverages, and other analytical functions.

Two-dimensional maps effectively depict different classifications of similar information, such as variable population densities across a municipal area. Three-dimensional thematic maps are typically used to represent socioeconomic values and are created through the use of raised polygonal prisms. The system's polygon data analysis capabilities permit the use of overlay polygons of two or more cartographic data bases of a region to create a new, generally more complex data base.

The EMIS package can be used for natural resources management, optimal facilities siting, forest management and planning, environmental assessment, market surveys, urban and regional planning, land-use analysis, socioeconomic studies, transmission line siting, and integration of classified remotely sensed data.

Price: $40,000
Contact: Sales Department
(713) 240–5000
SYNERCOM TECHNOLOGY, INC.
10405 Corporate Drive
Sugar Land, TX 77478

ERDAS Image Processing and Geographic Information System

Operating System: MicroVMS, VMS
Keywords: • Geoscience • Graphics • Mapping

These image processing and computer mapping systems serve site engineering, land management, remote sensing, mineral exploration, forest management, and military terrain applications. Image processing capabilities allow mapping of satellite and aircraft multispectral data, which is then merged with geologic, topographic, land use, hydrologic, economic, demographic, and other data sources for geographic applications associated with resource management and development.

The system's activities range from digitizing information to mapping geographic products that fit project requirements. The technology includes new methods for remote sensing from satellites, image processing, computer mapping, color display of data, environmental impact analysis, mineral exploration, land management, planning, and decision analysis. Computer graphics and automated mapping are valuable for displaying geographic relationships clearly and concisely, showing where activities should be located or excluded.

In Europe, contact CIS GMBH, Co KG, Klenzestrasse 18, 8000 München 5, Federal Republic of Germany. Telex: 841 521 6180 CIS D.

In Japan, contact Nissho Electronics Corp., Konwa Building, 12–22 Tsukiji 1-Chome, Chuo-Ku, Tokyo, 104 Japan. Telex: J 22233/22234.

In Australia, contact Datamatic Pty, Ltd., 9 Byfield Street, P.O. Box 145, North Ryde, New South Wales 2113, Australia, 61–2–888–1788. Telex: 790 27508.

A version of this product is available for the PDP–11 computer.

Price: $35,000

Contact: Bruce Q. Rado
(404) 872–7327
ERDAS, INC.
430 Tenth Street, N.W., Suite N206
Atlanta, GA 30318

ES–LOG

Operating System: VMS

Keywords: • Geoscience • Petroleum

This menu-driven log analysis program allows the user to input well log data to a data base from wireline service company tapes, through a digitizer or manually. The user can then analyze this data on a color graphics terminal or execute in a batch mode. Intermediate or final results, including standard or user-defined models, can be sent to a color copier, printer, plotter, or archive tape.

A version of this product is available for the PDP–11 computer.

Price: $49,000 – $78,000
Contact: Joseph D. Lillard
(303) 762–0285
ENERGY SYSTEMS TECHNOLOGY, INC.
3669 S. Huron Street, Suite 202
Englewood, CO 80110

GDM (Geological Data Base Management System)

Operating System: VMS
Keywords: • Data base management • Mining • Petroleum • Statistics

This easy-to-use interactive system with on-line help stores and displays spatially distributed geological data for the petroleum and mining industries. Command files need to be set up only once, allowing additional parameters to be included later.

One function of GDM lists data, and the other conducts statistics on the data. GDM can handle point sample data, drill hole data, block models of reserves, topographic curves, and faults and includes specialized commands for drill hole handling.

GDM features:

- Data storage and editing of drill holes, trenches, and underground galleries
- The updating, adding, deleting, correcting, transforming, retrieving, and sorting of data
- The performance of elementary statistical studies
- The calculation of sample coordinates from dip and strike angles and the composition of samples on regular length or according to benches
- The selection of drill samples by cut-off grades or other geologic requirements and the integration of drill hole data by accumulating calculations (for veins or stratabound deposits)

The GRAPHLIB module for graphics output and the GEORES module for geostatistics are available.

Price: $15,000
Contact: Stephen Krajewski
(303) 980–8625
GEOMATH, INC.
4891 Independence Street, Suite 250
Wheat Ridge, CO 80033

GEOPAK/GEOINT

Operating System: VMS
Keywords: • Geoscience • Mapping • Software utilities

This application package provides unique possibilities in plotting 2-D and 3-D maps. Subroutines are included to generate 2-D and 3-D grid and contour maps from gridded data. The 3-D contour routine adds a fourth dimension to computer graphics by making it possible to combine shaded color (or black-and-white) surfaces with 3-D contour grids in a single plot.

GEOPAK accepts unlimited input. The 2-D contour maps produced by the GEOPAK raster system are easier to read than vector plotted maps, because shading and raster patterning eliminate confusion in viewing elevations and contours. GEOPAK requires RASPAK for fundamental raster graphics capability.

GEOINT, which requires both GEOPAK and RASPAK, is a set of interpolation routines for use with GEOPAK. The plotting routines of GEOPAK differ in their requirements of input data. Some need regularly spaced data points; some accept irregularly spaced data and interpolate their own regularly spaced points. Plotting routines accepting regularly spaced data points need the matrixes to be filled out (additional points must be added to fill more cells) before they can be used as input.

The gridding techniques of GEOINT are based on methods of interpolation at grid locations using surrounding irregularly spaced data points.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

GIMAGE

Operating System: VMS
Keywords: • Geoscience • Graphics • Mapping

This application package for black-and-white or color image processing uses a threshold matrix technique to specify the mapping of numeric data into intensities and/or colors. Sixteen levels of shading are provided for each primary color. For devices without intensity control, the 16 levels are based on dithering techniques to achieve smooth transitions between levels. Because GIMAGE allows the user to scale images to any suitable scale, a remote sensing plot can be superimposed on a scanned geological map. For example, instead of using the UNIRAS default shades, users can define their own patterns for image processing. For example, shades based on 2×2, 4×4, or 8×8 pixel matrixes can be specified.

GIMAGE can display data values using gridded data. The color and data values in a grid map indicate values assigned to a given cell. An image composed of many gridded data cells showing the distribution of elements across the terrain is useful in land development or environmental impact studies. GIMAGE requires UNIRAS RASPAK.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

GRAPHLIB

Operating System: VMS
Keywords: • Data base management • Graphics • Software utilities

This graphics capability package complements the geological data base management system GDM and includes the following programs:

- GDISP — 2-D or 3-D display of data points (holes, blocks), plans, sections, and block diagrams
- GDHLOG — Plotting of hole log representations
- GISO — Plotting of isocurves from 2-D or 3-D grid models
- GDIAG — Computation of 3-D block diagram from data located at gridded points
- GSYMB — Display of complete catalog of symbols and patterns
- MGRID and MSECT — Generation of grids or sections from data stored in GDM files

Those programs support graphical displays, pen, electrostatic plotters, and so on.

Price: $10,000
Contact: Stephen Krajewski
(303) 980–8625
GEOMATH, INC.
4891 Independence Street, Suite 250
Wheat Ridge, CO 80033

HCOMP

Operating System: VMS
Keywords: • Flow analysis • Operations • Petroleum • Pipeline simulation

This steady-state simulation model is for the design and analysis of multicomponent, multiphase flow in pipeline gathering and transmission systems. Relevant correlations for single and multiphase flow can be selected to accurately model operating conditions or meet design specifications. HCOMP models terrain, pipeline inclinations, and process equipment. Compressors, pumps, separators, and valves are

included so that thermal and fluid composition effects can be analyzed throughout a pipeline network. HCOMP calculates heat transfer and temperature profiles. An internal flash package is also available. HCOMP supports special options for the development of operational alternatives and is used to determine pressure drop and deliverability for proper pipe-size selection. Pumps and compressors can be sized and spaced automatically to meet a given system deliverability.

Price: Available upon request

Contact: Pipeline Marketing Manager
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

INTERACT

Operating System: VMS

Keywords: • Flow analysis • Operations • Petroleum • Pipeline simulation

This real-time computer system simulates the dynamics of an operating pipeline network and the control and display functions of a SCADA (supervisory control and data acquisition) system. The pipeline industry can now rely on INTERACT to depict a pipeline network and its operating dynamics to dispatcher trainees, design engineers, and policy makers and gain the advantages that this realistic experience affords — without the risks or cost of operating a pipeline.

Any pipeline network may be simulated and operated as if from a SCADA system, because INTERACT is functionally the same as a SCADA system except that pipelines, equipment, controls, and RTUs have been replaced by a fully transient controls model. Users may operate pipeline controls, modify the network, impose a stream of events on the network, and see the effects of those actions on the dynamics of the pipeline network without affecting the operational pipeline or SCADA system. Dispatchers, management, and designers can use this capability to quickly and safely determine the effects of operations, design, and policy decisions before implementation.

Price: Available upon request

Contact: Pipeline Marketing Manager
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

IPAS/100 (Integrated Petroleum Accounting and Land Management System)

Operating System: VMS

Keywords: • Accounting • Energy • General ledger • Petroleum

Distribution medium: 9-track 1600 bpi magnetic tape.

This thorough yet easy-to-use set of computerized accounting tools, written in COBOL, is designed for the growing single or multicompany oil producer. The system operates in batch and/or on-line mode and features journal entry, general ledger, budgeting, joint interest billing, vendor payables, purchaser input, revenue distribution, windfall profit tax, land management, asset reporting, and general-purpose partnership accounting and investor communications subsystems.

The integration of the IPAS/100 allows data input only once to be accessed throughout the system, providing information required for effective processing and reporting to each subsystem.

A version of this product is available for the PDP–11 computer.

Price: $100,000 – $250,000

Contact: Robert H. Black
(405) 636–1587
PETROLEUM SOFTWARE SYSTEMS, INC.
8265 S. Walker
Oklahoma City, OK 73139

IPS (Interpretive Processing System)

Operating System: VMS

Keywords: • Data conversion • Geoscience • Seismic modeling • Signal processing

This generalized system is used for manipulating wavelets and their spectra, determining the shape of the propagating seismic wavelet, and altering seismic data to produce the equivalent section that would have resulted if the wavelet had a more desirable shape. Procedures for converting seismic data to synthetic acoustic logs (SYN–LOGS) are included.

Because wavelet processing of seismic data is a highly interpretive procedure, IPS is a generalized and open-ended system. Signal processing tools rather than processes are emphasized. Although processing programs are provided, the availability of the basic tools allows the user to define unique processing sequences. The user can add new processing techniques, developed with the basic tools, as processing programs.

A combined utility program and supervisor allows the user to manipulate sampled data and to call processing modules to process data in bulk. The processing programs allow the user to extract data from seismic files and manipulate it, to filter seismic data with the generated operators, and to produce specialized plots of the seismic data. IPS also includes the means for maintaining a library of wavelets and operators.

Price: Available upon request
Contact: Harry Cunningham
(713) 627–7180
GEOQUEST INTERNATIONAL, INC.
4605 Post Oak Place, Suite 130
Houston, TX 77027

ISM (Interactive Surface Modeling)

Operating System: VMS
Keywords: • Geoscience • Mapping • Mining • Petroleum

This automated surface mapping and analysis system, written in FORTRAN, performs mapping and analysis functions for the exploration of oil, gas, coal, and other natural resource activities. ISM uses Dynamic Graphics' Surface Display Library (SDL), Surface Gridding Library (SGL), and Trend Surface Library (TSL) and FORTRAN-callable subroutine libraries. This menu-driven system is used primarily to create models and maps from geologic, geophysical, and terrain data.

ISM's capabilities include data entry and editing; file management; grid calculations and operations; contour map and perspective view generation; fence diagram, block diagram, and cross-section generation; and volumetric calculations. ISM also supports vertical and nonvertical faults; surface annotation (points, lines, polygons, and text); on-screen graphical editing of supported data types, including grids; geographic coordinate systems, including latitude/longitude, UTM, and State Plane; a wide variety of plotters and graphic display devices; and companion interactive software products: Seismic Line Processor (SLP) and Interactive digitizing option to ISM.

In Europe, contact Peter Irwin, Irwin Houston Scientific Ltd., 40 Welby Crescent, Winnersh, Wokingham, Berkshire RG11 5SW, England 011–44–0734–790–836.

In Canada, contact Jay Turner, Dynamic Graphics, Inc., c/o D&S Petroleum Consulting Group Ltd., 700 Palliser Square One 700, 125 9th Avenue S.E., Calgary, Alberta, Canada T2P OP6 (403) 268–6600.

Price: $87,500 – $97,500
Contact: Jeffrey Swalm
(415) 845–8180
DYNAMIC GRAPHICS
2855 Telegraph Avenue, Suite 405
Berkeley, CA 94705

KRIGPAK

Operating System: VMS
Keywords: • Calculation aids • Geoscience • Statistics

This application package was developed for geostatistics, which applies modern statistical methods to geology, mining, and environmental studies. KRIGPAK uses the most modern and accurate statistical methods for the study of spatial variations in two or three dimensions. The Kriging technique produces reliable results and plays a central role in the process. KRIGPAK clearly identifies data that is insufficient for a reliable analysis in specific regions.

Steps for constructing semivariograms and estimating drift components are provided, along with routines for the constructing of interpolated 2-D and 3-D grid points by means of strict Kriging or universal Kriging. Fault analysis is another included feature.

The results of these calculations can be displayed in maps, using UNIRAS–GEOPAK. By the inclusion of KRIGPAK in UNIRAS, the unique mapping and plotting features of GEOPAK can be combined to provide a complete system for applications in geology, mining, and related subjects.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

Logcalc II

Operating System: VMS
Keywords: • Calculation aids • Geoscience • Petroleum • Research

This interactive menu-driven program for investigation and manipulation of well log data integrates with a series of analysis tools that provide versatility in performing in-depth petrophysical modeling and research. The well log analysis process is enhanced through fully interactive graphics displays and user-customized equations. Standard industry methodology is provided through simplified menu input. Batch processing capabilities are available for full field study evaluations. The Logcalc II system reads Schlumberger LIS/CSO, Dresser-Atlas BIT, and other industry-standard formats. In addition, Logcalc II Dresser-Atlas BIT provides direct interactive graphics digitizing input for small sections of logging data. Hard-copy output is supported on most plotter hardware equipment.

Price: Available upon request
Contact: Jimmy Duckworth
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

MAP–PAC©

Operating System: VMS
Keywords: • Mapping • Petroleum • Seismic modeling • Simulation

MAP–PAC modules are used for 2-dimensional ray-trace seismic modeling. The modules include post–stack processing, seismic mapping, and map migration.

The post–stack processing module computes attributes of seismic traces, interpolates them to interpreted events, and allows for cross-section or map display by the seismic mapping module, which is designed for automated timing and posting of interpreted seismic reflections. Geologic features can be digitized simultaneously with the reflector times. The map coordinates for shot point locations, necessary for posting the data values, can be read from navigation tapes or digitized directly from base maps.

A powerful, menu-driven program interactively edits, sorts, and interpolates by line name and shot point number, converts stacking velocities for depth conversion, and makes screen plots of map data, allowing the user to pan and zoom. With the data base created, appropriate calculations, such as isotimes, depth, and isopachs, are made. Velocity data can be added from digitized velocity gradient maps. With the map migration module, time contours can be digitized and processed to produce migrated depth maps.

Price: $7500
Contact: Gary Snyder
(303) 233–2397
EVERGREEN GEOPHYSICAL ASSOCIATES, INC.
9277 West Alameda Avenue
Lakewood, CO 80226

Mastercontrol

Operating System: VMS
Keywords: • Data collection • Flow analysis • Process control • Production control

Mastercontrol provides data acquisition, monitoring, and control facilities for industrial processes. Functions include display and logging of status, event messages, display of mimic diagrams, histograms and trends, alarm annunciation and acknowledgment, control initiation, diagnostics, and maintenance aids. Mastercontrol is suitable for flow-control applications, such as water distribution and gas and oil pipeline controls.

A version of this product is available for the PDP–11 computer.

Price: $40,000 – $80,000
Contact: Bob Wisniewski, Manager, Advanced Systems
(212) 599–0828
LOGICA INC.
666 Third Avenue
New York, NY 10017

MEDSYSTEM (Mine Evaluation and Design System)

Operating System: VMS
Keywords: • Engineering • Geoscience • Mining • Simulation

Memory required: 500–3000KB. Distribution medium: magnetic tape.

This flexible system, written in FORTRAN–77, serves organizations that evaluate different mineral deposits each year. MEDSYSTEM may be used in mine evaluation — from analysis of exploration drilling to feasibility studies and mine operations. MEDSYSTEM programs are divided into several logical phases: project management and general plotting, drill-hole data base creation, statistical and geostatistical analysis, composite value analyses, geologic and mine model development, variable block modeling, open-pit and underground-mine designs, geologic and mine reserves, production scheduling, and financial analysis.

Price: $75,000 – $150,000
Contact: Fred Banfield
(602) 795–3891
MINTEC, INC.
P.O. Box 31420
Tucson, AZ 85751

MIMIC

Operating System: MicroVMS, VMS
Keywords: • Energy • Geoscience • Mapping • Petroleum

Memory required: 2MB.

MIMIC is a powerful user-friendly tool for the easy and efficient construction of digital models of arbitrarily complex 3-dimensional geologic structures. Model definition should be made as effortless as possible to gain the full benefits of 3-dimensional modeling. Also important is user involvement with the model-building process to guide the computer in the determination of an acceptable model.

MIMIC has three major functions: to define and edit contour maps (time, depth, velocity, and so forth); to compile those maps into 3-dimensional geologic models; and to examine and verify maps and models, using interactive color graphics. Contour maps may be constructed from irregularly sampled data, from independently gridded data, and from standard geometric shapes; existing maps may be modified by either point or grid editing. Geologic models are then built as a

set of seismic reflectors and faults, with their associated material properties. Horizon depths may be shifted on entry into the model to honor well control, and any interface may be used more than once to model, for instance, a layer with constant isopach. Automatic pinchout allows combining two or more layers to easily model reverse faults, recumbent folds, and necking on the sides of salt domes. Throughout MIMIC, color contour maps, isopach maps, cross sections, and 3-dimensional perspectives are always available.

MIMIC is written in FORTRAN–77. Purchase includes one color-graphics driver. Additional drivers may be obtained for a wide variety of color and monochrome terminals and hard-copy devices. MIMIC requires a minimum of 20 megabytes of disk space.

Price: Available upon request

Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
Redmond, WA 98052

MODMIG

Operating System: VMS

Keywords: • Geoscience • Petroleum • Seismic modeling • Signal processing

This depth migration program properly migrates zero-offset data when lateral variations of velocity exist in the section. Based on the wave equation and operating in the frequency-space (F–X) domain, MODMIG accounts for lateral velocity variations to properly positioning events in depth and space. The system accepts velocity information as stacking velocities or a detailed velocity/depth model. Bandwidth and character throughout the section are preserved. MODMIG migrates dips to 70 degrees, with 30- and 45-degree options available. The user can control the bandwidth to be migrated. The system optimizes antialiasing and aperture controls separately for each frequency. The system produces a migrated section in depth and, optionally, a section resampled to time and can produce the remaining partially migrated section at any depth. Migration is performed in the space-frequency domain, using a recursive downward continuation algorithm.

The space domain is retained because it is flexible enough to properly account for lateral variations of velocity.

Because the migration is in depth and recursive, interval velocities must be used. The MODMIG migration system can accept velocity input as a detailed interval velocity model or as stacking (or migration) velocities at various locations along the lines to be migrated.

Price: Available upon request
Contact: Harry Cunningham
(713) 627–7180
GEOQUEST INTERNATIONAL, INC.
4605 Post Oak Place, Suite 130
Houston, TX 77027

MTRAN

Operating System: VMS
Keywords: • Flow analysis • Geoscience • Petroleum • Pipeline simulation

This general simulation model for the design and analysis of steady-state fluid flow in pipeline networks is a black oil model with multicorrelations to simulate single or multiphase flow. MTRAN can be used to design simple or complex networks with wide variations in terrain, pipe inclinations, and field equipment. Facility planning, line and equipment sizing, and bottleneck location are provided by MTRAN. For a given design flow, the model computes pressures, velocities, holdup, horsepower, and equipment performance. MTRAN also calculates the flow capacity (deliverability) of a network for any given set of operating pressures. The flow can be modeled from reservoirs through wellbores and gathering and transmission systems.

Price: Available upon request
Contact: Pipeline Marketing Manager
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

MULTIPIT

Operating System: VMS
Keywords: • Decision support • Mining

MULTIPIT helps the project engineer or geologist determine the ultimate open-pit configuration in the early stages of mine planning and enables the generation of different pit designs, all appropriate for the deposit. Each configuration in the 10 to 30 optimal pits is the technically best pit for its size in terms of recovered tons of metal for a given selection process, cut-off grade, and slope. From these projected pits, mining professionals can then select the most economical design.

To ensure that all options are proposed, projections are generated without regard to the price of the commodity, the cost of the mining method, or the rate of return or other economic variable. Optimal exploitation sequence, waste resulting from roads, geometrical shapes of the pits' true grade/tonnage relationships, and selected profit formulas can be entered into the calculations. Thus, at an early stage, the mining professional can quantify the risk of operating the proposed mine.

Price: $25,000
Contact: Stephen Krajewski
(303) 980–8625
GEOMATH, INC.
4891 Independence Street, Suite 250
Wheat Ridge, CO 80033

OGA$ (Oil and Gas Accounting System)

Operating System: VMS
Keywords: • Accounting • Financial management • Petroleum • Report writer

Distribution media: magnetic tape, RL02.

This computer-based interactive, integrated accounting and financial system is tailored to the special information needs of the small to medium-size oil and gas company. The system handles multicompany operations with automatic intercompany transactions; provides instant access to data files; features interactive data entry and editing; and integrates the accounts payable, payroll, AFE, joint interest billing, and revenue distribution systems with the general ledger, with transactions between those systems made automatically.

OGA$ provides these applications:

- Accounts payable: Complete processing of invoices with general ledger distributions, aging of payables, cash requirements forecasting, and printing of voucher checks
- General ledger/financial statements: Profit and loss statement, balance sheet, budgetary and comparative financials, audit trails, AFE reporting, and transaction reporting by lease
- Joint interest billing: Preparation of investor invoices and statements, accounts for prepayments by owner by lease, and recording of operator's share in general ledger
- Revenue distribution: Maintenance of revenue suspense and windfall-profits excise-tax data, preparation of revenue distribution checks, and purchaser-oriented entry of revenue items
- Management reporting: Lease well-history reporting for property management and for payout status, lease cash-flow reports for tax reporting, and lease economic analysis
- Lease records: Complete tracking of lease inventories, rental forecasts, critical-date monitoring, preparation of partner billings, and rental checks
- Payroll features: Preparation of payroll checks, maintenance of payroll history, handling of rig payrolls by rig/job, and preparation of W–2 reports

A version of this product is available for the PDP–11 computer.

Price: $30,000 – $75,000
Contact: Larry D. Gatlin
(915) 687–2226
TECHTRONIC DATA SYSTEMS, INC.
407 N. Big Spring
Midland, TX 79701

OGRE (Oil and Gas Reserve Evaluation System)

Operating System: VMS
Keywords: • Financial analysis • Geoscience • Petroleum

OGRE is a standard industry tool for economic analysis of petroleum ventures. As an information system, OGRE can be used to examine the economics of exploration and existing production and investment projects. OGRE also provides flexible data handling for easy analysis of changing variables and simple grouping for summary analyses.

The system generates production curves, income flows, discounted cash flow, present worth, and other profitability indicators for financial analysis. That information can be displayed in both before– and after–federal tax formats.

OGRE applications include production and budget forecasting; reserve reporting; reserve recognition, enhanced recovery, incremental, and tertiary economics; bonus determination; acquisition, sensitivity, and decision tree analyses; expected-value (risk) analysis; drilling funds; and SEC 10K reports. OGRE produces standard reports on before- and after-tax economics and concise before- and after-tax economics; expanded, detailed accounting; windfall-profits analysis; bonus price versus rate-of-return table; input-data description; and tailored output reports.

Price: Available upon request
Contact: Randall L. Neal
(214) 349–6900
DAVID P. COOK & ASSOCIATES, INC.
6510 Abrams, Suite 410
Dallas, TX 75231

POGO®

Operating System: VMS
Keywords: • Calculation aids • Financial analysis • Geoscience • Taxes

This oil and gas lease economic evaluation model computes and reports the values of oil and gas leases (both before and after taxes) in terms of profit indicators. Detailed calculations of cash flows by month, quarter, or year incorporate pertinent factors relating to production, prices, operating expenses, royalties, interests, capital investments, and income taxes. The program can be used for any type of interest owned

in a lease. POGO can be updated regularly to incorporate the changes in tax structure for the United States, Canada, United Kingdom, and other foreign countries.

Applications evaluate oil- and gas-producing properties or proposals for exploration alternatives, acquisitions (land/production/ companies), infill drilling economics, acceleration projects, foreign concessions, farm-out/farm-ins, reserves valuations and production forecasts, enhanced recovery schemes, and capital/operating budgets.

POGO stores input data, description lines, and calculated results for any case. Such a data base environment maximizes access to property evaluations by organizing and categorizing properties according to individual needs; provides easy, efficient methods for updating and retrieving properties; facilitates high-volume sensitivity analysis; handles consolidations easily; enhances efficient storage management; and requires minimum user training.

In Canada, contact Timothy N. Shaw, PSI Energy Software Ltd., 914 Fifteenth Avenue, SW, Calgary, Alberta T2R OS3 (403) 245–6820.

Price: Available upon request
Contact: Rosemarie Waiand
(713) 496–4850
PSI ENERGY SOFTWARE, INC.
14811 St. Mary's
Houston, TX 77079

Probe

Operating System: VMS
Keywords: • Geoscience • Petroleum • Statistics

This unique log analysis system provides up-to-date statistical techniques for estimating petrophysical parameters, such as porosity, saturations, clay content, and matrix mineralogy. Probe accepts all available logging data, including the newest tools. Based on tool response equations, user-controlled geological models, and statistical techniques, Probe reconstructs the log data responses to correspond to the input data, producing a solution for the petrophysical and matrix parameters. This technique automatically compensates for bad data from bad-hole effects, cycle skipping, miscalibrated logs, and so on. The user creates or modifies geological models through simplified interactive full-screen menus. The geological model may be set up to correctly evaluate for the presence of feldspars, micas, evaporites, heavy minerals, and so on. Hard-copy trace plotting is supported through most plotting hardware. The results may also be reviewed through Logcalc II interactive graphics.

Price: Available upon request
Contact: Jimmy Duckworth
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

QUIKCDP

Operating System: MicroVMS, VMS
Keywords: • Mapping • Petroleum • Seismic modeling • Signal processing

Memory required: 2.5MB.

Common midpoint (CMP)-gathered seismic data represents a useful intermediate processing point between raw shoot records and stacked seismic sections. At this point, a 3-dimensional raytracing program, QUIKCDP, can show how often the assumptions made in standard processing do not agree with reality. For instance, the concept of common depth point truly applies only to flat layered structures. QUIKCDP clearly shows how a 3-D structure causes lateral smear of the depth points associated with a CMP gather. QUIKCDP also shows the true nonhyperbolic moveout curve for comparison to standard assumptions. The reasons for poor signal enhancement in stacked data are not always clear, but with a modeling program, structure-related causes may be separated from other noise.

QUIKCDP is extremely general in terms of seismic-field configuration and types of raypaths. Straight seismic lines, dogleg lines, arbitrarily curved lines, and full 3-D shoots are supported. The interpreter may then propagate any geometric ray, including P-waves, S-waves, converted phases, and multiples of any order. Final raypaths are found by iteration on a preliminary sampling for each raypath type. Amplitude and phase of each arrival include effects of angle-dependent reflection/transmission coefficients, mode conversion, geometric attenuation, and internal caustics. Anelastic attenuation operators, RMS velocity, and path length are also provided for each arrival.

QUIKCDP is written in FORTRAN–77. Purchase includes one color-graphics driver. Additional drivers may be obtained for a wide variety of color and monochrome terminals and hard-copy devices. QUIKCDP requires a minimum of 20 megabytes of disk space.

Price: Available upon request
Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
Redmond, WA 98052

QUIKDIG

Operating System: MicroVMS, VMS
Keywords: • Energy • Geoscience • Mapping • Petroleum
Memory required: 0.2MB.

QUIKDIG works with well logs to create input files for QUIKLOG, Sierra's well log analysis and 1-D seismics package. QUIKDIG is integrated with Sierra's geologic-modeling program, MIMIC, to digitize contour maps for gridding and to directly create 2-dimensional geologic models from cross sections. QUIKDIG generates group and shoot-point location files for Sierra's 3-dimensional raytracing software and also combines information from base maps and seismic sections for automated map posting and computer contouring.

QUIKDIG is written in FORTRAN–77 and requires a minimum of one megabyte of disk space.

Price: Available upon request
Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
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QUIKLOG

Operating System: MicroVMS, VMS
Keywords: • Energy • Geoscience • Mapping • Petroleum
Memory required: 0.2MB.

Seismic well log analysis predicts synthetic trace amplitudes from sonic and density logs and the nonseismic estimates material properties, including velocity and density, from a variety of log types. QUIKLOG supports both activities in a common framework of interactive color graphics.

In log entry mode, QUIKLOG supports interpolation, smoothing, editing, stretching, and tying of multiple log types for a well. In seismic mode, QUIKLOG produces montage displays of logs, filtered logs, seismic traces and filtered traces, all with appropriate header information; produces apparent 2-D seismic lines defined by interpolating seismic traces between two or more wells; and produces 1-D VSP sections. In nonseismic mode, QUIKLOG calculates a wide variety of material properties as a function of depth, based on the log types available. QUIKLOG is fully integrated with Sierra's geologic-modeling program, MIMIC; can produce input models for Sierra's VESPA seismic-modeling program; and shares many trace display attributes, including SEGY file format, with Sierra's SLIPR program.

QUIKLOG is written in FORTRAN–77. Purchase includes one color-graphics driver. Additional drivers may be obtained for a wide variety of color and monochrome terminals and hard-copy devices. QUIKLOG requires a minimum of one megabyte of disk space.

Price: Available upon request
Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
Redmond, WA 98052

QUIKRAY

Operating System: MicroVMS, VMS
Keywords: • Mapping • Petroleum • Seismic modeling • Signal processing

Memory required: 2MB.

The QUIKRAY program directly simulates stacked seismic sections by performing 3-dimensional raytracing in either normal-incidence mode or image-ray mode for sections before or after time migration. The corresponding raypath plots provide a direct picture of the interaction of seismic rays with the subsurface geology. Most of the arrivals from a 3-dimensional structure come from out of the plane of the profile.

QUIKRAY is extremely general in terms of seismic-field configuration and types of raypaths. Straight seismic lines, dogleg lines, arbitrarily curved lines, and full 3-D shoots are supported. The interpreter may then propagate any geometric ray, including P-waves, S-waves, converted phases, and multiples of any order. Final raypaths are found by iteration on a preliminary sampling for each raypath type. Amplitude and phase of each arrival include effects of angle-dependent reflection/transmission coefficients, mode conversion, geometric attenuation, and internal caustics. Anelastic attenuation operators, RMS velocity, and path length are also provided for each arrival.

QUIKRAY is written in FORTRAN–77. Purchase includes one color-graphics driver. Additional drivers may be obtained for a wide variety of color and monochrome terminals and hard-copy devices. QUIKRAY requires a minimum of 20 megabytes of disk space.

Price: Available upon request
Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
Redmond, WA 98052

QUIKSHOT/QUIKVSP

Operating System: MicroVMS, VMS
Keywords: • Mapping • Petroleum • Seismic modeling • Signal processing

Memory required: 2MB.

The QUIKSHOT program performs 3-dimensional nonnormal incidence raytracing to simulate shot records, which is useful in the design of field programs for data acquisition and in the interpretation of that data. Such simulations also provide calibrated input for the choice of standard processing parameters and the testing of new data processing techniques. The corresponding raypath plots presented to the interpreter clearly show all arrivals, including those from out of the plane of the profile.

The QUIKVSP program performs 3-dimensional nonnormal incidence raytracing to simulate vertical seismic profiling and offset VSP. Because QUIKVSP works with highly sophisticated models of the subsurface, QUIKVSP contributes to the efficient solution of most borehole seismic problems.

QUIKSHOT and QUIKVSP are extremely general in terms of seismic-field configuration and types of raypaths. Straight seismic lines, dogleg lines, arbitrarily curved lines, and full 3-D shoots are supported in QUIKSHOT; QUIKVSP supports vertical, slant or arbitrarily deviated, or curved well geometries for VSP simulations of arbitrary offset. Cross-hole VSP simulations are also supported.

QUIKSHOT and QUIKVSP are written in FORTRAN–77. Purchase includes one color-graphics driver. Additional drivers may be obtained for a wide variety of color and monochrome terminals and hard-copy devices. QUIKSHOT and QUIKVSP require a minimum of 20 megabytes of disk space.

Price: Available upon request
Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
Redmond, WA 98052

RAPS® II

Operating System: VMS
Keywords: • Data base management • Petroleum • Production control

This data base system stores, computes, maintains, and reports production and reserves and performs other time-period information relevant to petroleum production and injection operations. Data can include property identification/description, reserves classification, initial reserves, cumulative and historical production and injection, company interest/partnership participation, and revisions to reserves.

After a property has been stored, estimates of remaining reserves can be kept up to date by entering current production and revisions. Updates can be easily made. Values reported can reflect gross, working interest, and/or net interest in both imperial and metric units.

Data stored on line allows a user to update, respond to requests, and simplify the organiztaion of data. The features incorporated ensure the integrity of data and prevent unauthorized access.

RAPS II can be used to incorporate your own reporting practices; formulate effective production, development, and acquisition strategies; perform sensitivity analysis on reserves changes; summarize petroleum and natural gas reserves for annual and interim reports; monitor the progress of reserves development/depletion programs; organize, tabulate, and monitor the historical performance and reserves of fields, leases, reservoirs, wells, and so forth; maintain accurate production records; examine production/injection profiles; and maintain historical reserves and/or revision information.

In Canada, contact Timothy N. Shaw, PSI Energy Software Ltd., 914 Fifteenth Ave. SW, Calgary, Alberta T2R 0S3 (403) 245–6820.

Price: Available upon request
Contact: Rosemarie Waiand
(713) 496–4850
PSI ENERGY SOFTWARE, INC.
14811 St. Mary's
Houston, TX 77079

RASPAK

Operating System: VMS
Keywords: • Geoscience • Graphics • Software utilities • Text management

The RASPAK fundamental raster package, required by UNIRAS application software, provides the tools for low-level operation of raster graphics, such as vector-to-raster conversion, area shading point plotting, and various text and lettering capabilities. Text fonts for fast text matrix processing and the more sophisticated smooth vector-oriented text are included. RASPAK also contains utility routines, required by UNIRAS application packages, that take care of the raster processing technique and device control, as well as the scaling of data. RASPAK also offers plot images, in raster format, that can be stored on disk and later erased or overlaid with other pictures, allows full segmentation handling of vector and raster devices, and uses local device intelligence as much as possible.

UNIRAS has a special technique for fast area shading of any specified polygon with predefined or user-defined patterns. That shading technique is used for efficient processing in mapping and seismic display applications, as well as in business graphics.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

RAY–PAC©

Operating System: VMS
Keywords: • Interpreters • Petroleum • Seismic modeling • Simulation

These ray-trace seismic modeling modules include 2-dimensional ray-trace modeling, amplitude versus offset, and interactive stacking:

- The ray-trace modeling module is based on the asymptotic ray theory for 2-D layered models. The model accommodates complex structures, such as thrust faults with overturned beds, and lateral variations in velocity and density within layers. Normal and nonnormal incidence ray-tracing may be run either at equal subsurface increments for quick displays of ray-paths and arrival times or at equal surface increments for complete calculation of synthetic traces. Inverse modeling migrates digitized horizon times into depth sections. The interpreter may interactively edit the velocity model to fit the migrated horizons.
- The amplitude versus offset module provides for analysis of amplitude and phase versus offset distance for horizontal layers with specified *p*-wave velocity, *s*-wave velocity, and density. *S*-wave velocities can be estimated by entering lithologic and well log data. Options to compute the effects of source and geophone arrays are valuable in designing field parameters.
- The interactive stacking module provides for hands-on testing of muting, NMO removal, and stacking of the synthetic traces from other RAY–PAC modules.

Price: $12,500
Contact: Gary Snyder
(303) 233–2397
EVERGREEN GEOPHYSICAL ASSOCIATES, INC.
9277 West Alameda Avenue
Lakewood, CO 80226

RAYMAP

Operating System: MicroVMS, VMS
Keywords: • Energy • Geoscience • Petroleum • Seismic modeling

Memory required: 5MB.

Every seismic interpreter continuously faces the problem of converting observed 2-way travel-time maps into depth models. Reliance on wave-theoretical migration schemes for 2-D seismic data generally means reliance on the poor assumptions of 2-dimensional symmetry in both structure and velocity. No provision can be made for out-of-plane or sideswipe arrivals. Even migration of 3-D seismic data by wave-theoretical methods is limited by dip angles and lateral-velocity variation. RAYMAP map migration uses a 3-dimensional method for depth conversion. By starting with interpreted time maps, RAYMAP avoids all 2-dimensional restrictions. Then RAYMAP uses high-quality 3-dimensional raytracing to determine a new depth contour map. Interval velocity may vary laterally in that method, allowing RAYMAP to explicitly incorporate well and stacking velocities into the migration. The generality of the method makes it ideal for application in areas of complex 3-dimensional geologic structure.

RAYMAP supports all three phases of time-to-depth conversion, including map development for both time maps and interval-velocity maps, migration of individual time maps through a geologic model, and initialization and upgrade of that geologic model as each layer is migrated. The migration step allows migration of multivalued or incomplete time maps and provides sophisticated editing functions on the resulting depth maps. Throughout the processing, contour maps, cross sections, 3-dimensional perspective views, and raypath plots are available to help the user evaluate progress.

RAYMAP is written in FORTRAN–77. Purchase includes one color-graphics driver. Additional drivers may be obtained for a wide variety of color and monochrome terminals and hard-copy devices. RAYMAP requires a minimum of 30 megabytes of disk space.

Price: Available upon request

Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
Redmond, WA 98052

RESIN™

Operating System: VMS

Keywords: • Geoscience • Graphics • Petroleum

Initialization matrix data for reservoir simulators is produced from Z–MAP contours. Restarts caused by bad inputs are virtually eliminated. The simulator grid is constructed through the use of interactive graphics, and matrix values are computed from each contour map. The simulator grid, matrix values, and contours of the matrix values can overlay the source map. Matrixes can be edited, spatially changed, or combined to produce other matrix inputs. RESIN keeps track of each set of data prepared for a history match.

In Canada, contact Brian Thomas, Virtual Computing Services, Ltd., 801 6th Street, S.W., Suite 215, Calgary, Alberta T2P 3VA, Canada (403) 266–7440.

In England, contact Jeff Donze, IPEC, 18 Hanover Square, London W1A 2BB, England 441–493–2061.

In Indonesia, contact Robert Capstick, Delta Computer Services, c/o P. T. Alton Nusantara Jaya, P.O. Box 18/JKWK, Wisma Kosgoro, 53 Jln. M.H. Thamrin, Jakarta 10350, Indonesia 62–323410.

Price: Available upon request
Contact: Donald A. Flanagan
(512) 441–5697
ZYCOR, INC.
2101 South IH–35, Suite 306
Austin, TX 78741–3818

RTPM

Operating System: VMS
Keywords: • Flow analysis • Forecasting • Process control • Real time

This real-time predictive system, used to improve the safety, reliability, and profitability of a pipeline operation, provides on-line automatic forecasts of future system performance under upset conditions, various modes of operation, changes in demand or supply, or any other condition under which the pipeline may be operated. Dispatchers can monitor system operations, predict what scheduled demands will do to the system and when operations are risky, determine the least-cost way out of trouble and when pipeline efficiency is deteriorating, and produce reports on sales and supply flows.

Selected data is acquired periodically from the pipeline SCADA (supervisory control and data acquisition) system. That data is used as boundary conditions to drive the model. The RTPM uses a data base–structured system, facilitating the addition of application modules without modification to the RTPM. That feature allows the user to select the appropriate application functions to meet initial needs and provides for easy growth.

Price: Available upon request
Contact: Robert Dartez
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

SDL (Surface Display Library)

Operating System: VMS
Keywords: • Graphics • Mapping • Petroleum • Software utilities

SDL, a library of FORTRAN subroutines used by the U.S. Geological Survey, National Bureau of Standards, resource/energy companies, oil and gas companies, national laboratories, and geophysical and geologic firms, produces graphical displays when given gridded X, Y, Z data. Maps include flat contour, raised contour perspective, 3-dimensional perspective, and flat contour key perspective. All displays are mapping quality and can be annotated with any amount of mapping information (points, lines, and polygons). SDL can also handle geologic faults.

SDL has an optional interactive front end, as well as a companion product, Surface Gridding Library (SGL), which produces a mathematical surface, a grid that honors scattered X, Y, Z data points.

Price: $20,000
Contact: Jeffrey Swalm
(415) 845–8180
DYNAMIC GRAPHICS
2855 Telegraph Avenue, Suite 405
Berkeley, CA 94705

SEISPAK

Operating System: VMS
Keywords: • Geoscience • Graphics • Mapping • Petroleum

This application package for applying color graphics to seismic data permits color hard-copy and color CRT displays to be generated from the same software package. SEISPAK performs both wiggle plotting and raster scanning. Wiggle plotting entails producing wiggles in black and white and in color. Both the negative and the positive amplitude can be plotted, with the wiggle colored according to the largest amplitude within the wiggle. Raster scanning represents each data point along a trace as a small colored rectangle. This approach is very cost-effective even when millions of samples are produced.

A benefit of SEISPAK is its 2-attribute plot capability, which offers a way to compare two attributes in a seismic section. SEISPAK produces a color plot of the first attribute, on which a wiggle trace overlay of the second is superimposed. Thus, users can correlate different data sets in a single display — for example, frequency and amplitude or polarity and velocity.

UNIRAS–SEISPAK can draw on a virtual plot area, which will automatically be segmented into device-size pages. SEISPAK can output seismic traces with an unlimited number of samples. SEISPAK requires RASPAK for fundamental raster graphics capability.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

SGL (Surface Gridding Library)

Operating System: VMS
Keywords: • Geoscience • Mapping • Petroleum

This library of FORTRAN subroutines produces a mathematical model of a surface of least tension or least curvature that honors scattered X, Y, Z data points. The result is a matrix $n \times m$ that accurately models both the computed surface and the original data. This matrix can be used for terrain, visual, and road building analysis; slope class studies; cut-and-fill calculations; and volume studies. The resultant grid can also be passed to the companion product, Surface Display Library (SDL), which can draw the surface as a contour map, mesh perspective, contour perspective, or flat contour perspective key. The maps are all mapping quality. SGL can also handle geologic faults.

Price: $20,000
Contact: Jeffrey Swalm
(415) 845–8180
DYNAMIC GRAPHICS
2855 Telegraph Avenue, Suite 405
Berkeley, CA 94705

SLP (Seismic Line Processor)

Operating System: VMS
Keywords: • Data collection • Geoscience • Petroleum

SLP is an automated data capture and calculation tool using seismic cross-section and seismic line (basemap) input data sources. This interactive menu-driven system reduces 2-D seismic survey data into scattered data suitable for surface model grid calculation. SLP requires the use of standard digitizing hardware and graphics display equipment and is a companion product to Interactive Surface Modeling (ISM) but may also be used by itself.

SLP's capabilities include:

- Interactive data entry and editing (digitizing)
- File management
- Seismic cross-section input: geologic horizons, vertical and nonvertical faults, pinch-outs, and shot-point numbers
- Seismic line (basemap) input: geographic coordinate reference (latitude/longitude, UTM, State Plane, and so forth and shot points along seismic lines

- Seismic processing output: scattered data (X, Y, Z1, Z2, ... Z*n*), and check plot map showing seismic line traces with fault breaks by horizon

In Europe, contact Peter Irwin, Irwin Houston Scientific Ltd., 40 Welby Crescent, Winnersh, Wokingham, Berkshire RG11 5SW, England 011–44–0734–790–836.

In Canada, contact Jay Turner, Dynamic Graphics, Inc., c/o D&S Petroleum Consulting Group Ltd., 700 Palliser Square One 700, 125 9th Avenue S.E., Calgary, Alberta, Canada T2G 0P6 (403) 268–6600.

Price: $25,000
Contact: Jeffrey Swalm
(415) 845–8180
DYNAMIC GRAPHICS
2855 Telegraph Avenue, Suite 405
Berkeley, CA 94705

STRAT–PAC©

Operating System: VMS
Keywords: • Geoscience • Mapping • Petroleum

EGA offers, as part of a package of integrated software modules, STRAT–PAC for seismic stratigraphic modeling, synthetic seismograms, and wavelet extraction/analysis. The modules are log preparation, synthetics (1-D) with modeling, wavelet extraction, and show management.

STRAT–PAC generates synthetic seismograms from digitized sonic and/or density logs. Check shot data may be entered to calibrate sonic logs. The logs, time-depth curves, drift errors, and corrections can be plotted. STRAT–PAC can use any filter with any amplitude and phase either defined by the interpreter or extracted from the seismic data. The digitized log files can then be used as the basis for stratigraphic modeling. The user alters the original log curves to model a geologic change. The model display is versatile and designed to exhibit acoustic impedance curves, applied wavelets, filtered synthetic traces, and annotated geologic tops.

A new STRAT–PAC module provides a menu-driven program (SHOMAN) for creating displays of check shot data, sonic and other well logs, and synthetic and real seismic traces in a montage for effective presentations to management.

Price: $7500
Contact: Gary Snyder
(303) 233–2397
EVERGREEN GEOPHYSICAL ASSOCIATES, INC.
9277 West Alameda Avenue
Lakewood, CO 80226

STRATVIEW™

Operating System: VMS
Keywords: • Geoscience • Petroleum

This system allows well logs and lithology to be displayed, manipulated, and correlated from well to well. Cross sections and well panels are annotated with symbolized lithologic columns, logs, unit names and rock types, connected tops, and appropriate legends. Log or lithology shifting, data flattening, algebraic and logical combinations, and editing tools are provided to manipulate the data. Correlation is expedited through interactive graphics to match units and automatically update the well records. Contours of any unit can be produced through the Z–MAP interface to check and assist correlation.

In Canada, contact Brian Thomas, Virtual Computing Services, Ltd., 801 6th Street, S.W., Suite 215, Calgary, Alberta T2P 3VA, Canada (403) 266–7440.

In England, contact Jeff Donze, IPEC, 18 Hanover Square, London W1A 2BB, England 441–493–2061.

In Indonesia, contact Robert Capstick, Delta Computer Services, c/o P. T. Alton Nusantara Jaya, P.O. Box 18/JKWK, Wisma Kosgoro, 53 Jln. M.H. Thamrin, Jakarta 10350, Indonesia 62–323410.

Price: Available upon request
Contact: Donald A. Flanagan
(512) 441–5697
ZYCOR, INC.
2101 South IH–35, Suite 306
Austin, TX 78741–3818

TCON

Operating System: VMS
Keywords: • Flow analysis • Pipeline simulation

This general-purpose transient simulation model for the design and operation of liquid pipeline systems simulates the transient response of controls, equipment, and fluids in pipeline networks. TCON is especially useful in the analysis of transients caused by pump start-up/shutdown, faulty control valve operation, potential bottlenecks, and hazards. TCON simulates analog control systems, and simple or complex control loops can be modeled and tuned for optimal field performance. Traditional transient-flow models use a structure that combines all equipment at a single location into a node. This "node and pipe" structure can oversimplify a complex system. TCON accounts for the full transient response of each element in a traditional node.

Price: Available upon request
Contact: Pipeline Marketing Manager
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

TGNET

Operating System: VMS
Keywords: • Flow analysis • Petroleum • Pipeline simulation • Query facilities

This general-purpose operations and gas control model for a gas pipeline system simulates time-varying flows and pressures resulting from changes in sources, demands, and equipment performance. The program simulates simple or complex networks with variations in terrain and field equipment. TGNET accounts for sudden changes, such as start-up/shutdown of compressors or sudden drastic fluctuations in gas supply/demand. Critical and costly resources, such as compressors, can be optimally scheduled to ensure economic performance subject to contractual restrictions.

TGNET input is through a question-and-answer session by way of an interactive, menu-driven input processor. Extensive help facilities, coupled with detailed input data checking and concise error reporting, allow the user to input data without using a user's guide. Automatic time-step selection eliminates guesswork and the ensuing trial-and-error procedure of arriving at a correct value. Moreover, simulation results can be archived by way of restart records and then called up later to initialize flows and pressures in a subsequent simulation.

A unique feature of TGNET is its energy balance, which allows for temperature profiles to be predicted throughout the system. This feature, coupled with TGNET's internal state equation, permits mass flow rates to be accurately determined.

Price: Available upon request
Contact: Ron Fischer
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

THERM

Operating System: VMS
Keywords: • Numerical analysis • Petroleum • Process control • Simulation

This 3-dimensional numerical reservoir simulator for the design and analysis of thermally enhanced oil recovery operations can simulate both steamflood and in situ combustion processes. In the steamflood mode, applications include hot waterflooding, steam drive, and cyclic steam stimulation processes. In the combustion mode, THERM simulates, in addition to steamflooding, both wet and dry, forward and reverse, and combustion processes. This flexible model solves problems ranging from single-component geothermal reservoirs to multicomponent in situ combustion operations, which may include any number of oxidation and cracking reactions.

The model simultaneously solves mass and energy balance equations written for each of a number of grid blocks representing a reservoir. A mass balance equation is written for each of *n* components included in the process description, and an overall energy balance equation is written to represent thermal effects. Equations are rendered into finite-difference form, using the most numerically efficient and stable, that is, a fully implicit, formulation.

Price: Available upon request

Contact: Marketing Vice President
(713) 953–9272
SCIENTIFIC SOFTWARE — INTERCOMP
10333 Richmond
Houston, TX 77042

TMS–5 (TANO Macro System), Version 5

Operating System: VMS

Keywords: • Data collection • Petroleum • Pipeline simulation • Process control

This fifth generation of TANO supervisory control and data acquisition (SCADA) software offers a powerful and versatile base for large data acquisition and control systems. TMS–5 monitors and controls up to 10,000 field signals, performing pipeline supervision, energy management, transit and utility system monitoring and control, and process control. The software baseline system can then be customized.

The TMS–5 operations are essential to every SCADA system. The baseline functions are data base management and generation, data acquisition, data processing, operator commands, report generation (using DATATRIEVE–32), interactive display generation, data display, and system history in the form of hard-copy logs.

TMS–5 provides the back-up capability of a secondary computer that maintains communication with the main, or primary, computer. Files can be transferred to the secondary computer either on a scheduled basis or when the user requests a transfer. Some applications are meter netting, over/short calculations, absorption volume computation, tank volume calculation, trending command list execution, and power distribution. Turnkey systems also available.

Price: $50,000 – $150,000
Contact: Bill Hunter
(504) 254–3500
TANO CORP.
4301 Poche Court West
New Orleans, LA 70129

UNIGKS

Operating System: VMS
Keywords: • Graphics • Mapping • Petroleum • Simulation

This package, developed as a realization of the international standard GKS 7.2, level 2b, includes full graphical output, workstation-independent segments storage, and synchronous graphical input in six input classes. Every device linked to UNIGKS handles segments, any of 21 software text fonts for high-quality text output, various line types (dotted, dashed, and so forth), and fill area (minimum: hatching and solid).

UNIGKS provides dynamic memory management and pointer-based table chaining and supports an unlimited number of segments, using a page mode that is entered automatically to avoid memory overflows. Complete separation between UNIGKS and its device drivers allows the user to run UNIGKS in distributed systems. Two types of graphical metafiles containing different intelligence enable even lower GKS levels to interpret UNIGKS metafiles — for example, on minicomputers.

UNIGKS hides different levels of device intelligence from the application program by simulating missing firmware facilities in software. A raster polygon fill on a vector plotter can, for example, be represented as a closed polygon with a shaded pattern. For simpler devices unable to handle segments, UNIGKS allocates buffers to them on the host computer, in a manner completely transparent to the user.

UNIGKS is offered as a stand-alone system or as an integrated part of existing UNIRAS software.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

UNIGRAPH

Operating System: VMS
Keywords: • Graphics • Mapping • Menu handlers • Petroleum

This chart-drawing package, based on UNIRAS–BIZPAK's flexibility, is menu driven and supports any hard-copy device supported by UNIRAS. UNIGRAPH includes a wide range of standard plots, including stacked and clustered bars, planning charts, and curves and smoothed curves, using markers, pie charts, and 3-D plots.

UNIGRAPH is designed for fast production. No programming is required, since specifications are made in a friendly dialog with the computer, using the color-display mode.

When UNIGRAPH is invoked, a menu is displayed, and the user can select a chart type by entering the appropriate number. UNIGRAPH differs from ordinary menu systems in that the menu is presented not only in the form of text lines but also by complete pictures.

The user can, at any stage during the UNIGRAPH session, save the chart or route to a hard-copy device.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

UNIMAP

Operating System: VMS
Keywords: • Geoscience • Mapping • Petroleum

This interactive mapping and modeling system is designed for easy and effective use by nonprogrammers. UNIMAP, built on top of the powerful GEOPAK, GEOINT, and KRIGPAK subroutine libraries, uses an interactive environment in which the dialog is menu oriented and can be kept brief for the experienced user. Retaining the device independence and device intelligence of UNIRAS, UNIMAP can run on any graphics terminal or hard-copy device. Pictures are manipulated in a display form on the terminal and are then plotted as hard copies in full color and resolution.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

UNIRAS

Operating System: VMS
Keywords: • Geoscience • Mapping • Petroleum

This implementation of GKS version 2, level 2b, features full dynamic memory management and supports an unlimited number of segments and workstations. UNIRAS's unique software rasterizer, RASCON, allows UNIGKS-based applications to use high-resolution raster plotters, such as ink jet, electrostatic, and photo plotters. That feature makes UNIGKS the only device-independent implementation of GKS.

The basic price includes RASCON and the most commonly used device drivers.

Price: Available upon request
Contact: Software Marketing Department
(617) 272–7260
UNIRAS, INC.
50 Mall Road, Suite 212
Burlington, MA 01803

VAX/IDIMS (Interactive Digital Image Manipulation System)

Operating System: VMS
Keywords: • Graphics • Mapping • Mining • Petroleum

VAX/IDIMS is used to address image-processing applications in reconnaissance, remote sensing, site planning, and seismic interpretation. The integrated turnkey product uses VAX processors as a host and high-performance Gould/DeAnza image display processors for each user workstation. The workstation environment includes a large local disk (456MB), a workstation host processor (11/24–11/84), and a real-time image display processor.

The ESL Geographic Data Management and Image Processing System (GEOMIPS) includes three information-processing systems that integrate with the 325 functions in IDIMS: the Geographic Data Entry System (GES), a vector data base and analysis package; the Earth Resource Information System, a relational attribute handling and statistical analysis package; and the ESL Data Catalog. ESL offers the following high-performance options for increasing data throughput and processing: FPS and CSPI array processors; high-speed synchronous data bus > 20 Mbyte/sec, sustained; parallel transfer disk storage; and high-resolution image and graphics display systems.

Comprehensive maintenance programs and support for all systems are available.

Price: $250,000
Contact: Robert Hall
(408) 743–6156
ESL INC.
495 Java Drive
Sunnyvale, CA 94088–3510

VESPA

Operating System: MicroVMS, VMS
Keywords: • Geoscience • Mapping • Petroleum • Seismic modeling

Memory required: 0.5MB.

Often the geologic structure of a prospect may be approximated by a set of horizontal viscoelastic layers. For such an earth model, VESPA calculates the complete and exact frequency-dependent seismic response to a point source in a 3-dimensional space. The solution includes all possible arrivals, such as body waves, surface waves, converted phases, multiples, and interface waves without numerical instability at any distance or frequency. Receivers may be on the surface for simulation of shot records or at depth for simulation of VSP and offset VSP.

VESPA synthetics may be used to test seismic processing algorithms, and several options exist to provide optimum comparisons. For instance, either P- or S-waves may be suppressed by VESPA to aid in phase identification; multiples may be suppressed to test dereverberation algorithms; or downgoing energy may be suppressed (especially in VSP) to test filter methods designed to do the same thing. That flexibility is obtained by careful separation of variables and dependencies in the ω–κ solution and in the application of boundary conditions.

VESPA is written in FORTRAN–77. Purchase includes one color-graphics driver. Additional drivers may be obtained for a wide variety of color and monochrome terminals and hard-copy devices. VESPA requires a minimum of 10 megabytes of disk space.

Price: Available upon request
Contact: Dr. Gary M. Lundquist
(206) 881–8833
SIERRA GEOPHYSICS, INC.
15446 Bel-Red Road, Suite 400
Redmond, WA 98052

WELLPLAN

Operating System: VMS
Keywords: • Geoscience • Petroleum

This easy-to-use program to plan and control well drilling offers the user the tools for hydraulic optimization, casing design, well control, path planning, bit optimization, prediction of bottom-hole-assembly performance, drill string design, and so on.

Complete support is provided, and WELLPLAN is available for lease or purchase.

Price: $5000 – $70,000
Contact: Dwight Yoder
(918) 664–9010
DRILLING RESOURCES DEVELOPMENT CORP.
6111 East Skelly Drive, Suite 415
Tulsa, OK 74135

Z–CAP™

Operating System: VMS
Keywords: • Data collection • Data conversion • Geoscience • Mapping

This system for the energy and mineral industries digitizes a variety of data, including downhole geologic and petrophysical data, cultural and geomorphic information, seismic sections and shotpoint locations, property boundaries, and contour. Z–CAP uses data from baseplane maps, well log, seismic sections, or geologic (general) cross sections. The data may then be manipulated to another form and submitted to mapping and modeling programs. The data is consistent with that produced with other Zycor products.

In Canada, contact Brian Thomas, Virtual Computing Services, Ltd., 801 6th Street, S.W., Suite 215, Calgary, Alberta T2P 3VA, Canada (403) 266–7440.

In England, contact Jeff Donze, IPEC, 18 Hanover Square, London W1A 2BB, England 441–493–2061.

In Indonesia, contact Robert Capstick, Delta Computer Services, c/o P. T. Alton Nusantara Jaya, P.O. Box 18/JKWK, Wisma Kosgoro, 53 Jln. M.H. Thamrin, Jakarta 10350, Indonesia 62–323410.

Price: Available upon request
Contact: Donald A. Flanagan
(512)441–5697
ZYCOR, INC.
2101 South IH–35, Suite 306
Austin, TX 78741–3818

Z–EDIT™

Operating System: VMS
Keywords: • Geoscience • Graphics • Mapping • Petroleum

Z–EDIT is used to reinterpret data, using interactive graphics. In a windowed area, usually selected from a contour map, contours can be erased and redrawn, faults can be introduced or modified, and data can be added or changed. The grid in the window is then regenerated and contoured on the screen. After changes are complete, the grid window is placed into the original grid. Multiple windows are used to edit separated areas.

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In England, contact Jeff Donze, IPEC, 18 Hanover Square, London W1A 2BB, England 441–493–2061.

In Indonesia, contact Robert Capstick, Delta Computer Services, c/o P. T. Alton Nusantara Jaya, P.O. Box 18/JKWK, Wisma Kosgoro, 53 Jln. M.H. Thamrin, Jakarta 10350, Indonesia 62–323410.

Price: Available upon request
Contact: Donald A. Flanagan
(512) 441–5697
ZYCOR, INC.
2101 South IH–35, Suite 306
Austin, TX 78741–3818

Z–MAP™

Operating System: VMS
Keywords: • Calculation aids • Geoscience • Mapping • Petroleum

Z–MAP produces grids and surface displays from geological and geophysical data, such as formation tops, zone thicknesses, average porosity, times, or velocities. Displays include fully annotated contour maps, multilayer cross sections, and 3-D perspective views.

Combinations, such as pore × thickness or time × velocity products, are produced by algebraic, logical, and other computations. Contours can be smoothed while maintaining important detail.

The volumetrics module can compute bulk rock volumes or perform detail reservoir volumetric studies by combining geologic and petrophysical surfaces, cutoffs, properties, and more.

In Canada, contact Brian Thomas, Virtual Computing Services, Ltd., 801 6th Street, S.W., Suite 215, Calgary, Alberta T2P 3VA, Canada (403) 266–7440.

In England, contact Jeff Donze, IPEC, 18 Hanover Square, London W1A 2BB, England 441–493–2061.

In Indonesia, contact Robert Capstick, Delta Computer Services, c/o P. T. Alton Nusantara Jaya, P.O. Box 18/JKWK, Wisma Kosgoro, 53 Jln. M.H. Thamrin, Jakarta 1035, Indonesia 62–323410.

Price: Available upon request
Contact: Donald A. Flanagan
(512) 441–5697
ZYCOR, INC.
2101 South IH–35, Suite 306
Austin, TX 78741–3818

Education

Irene Shwachman/The Picture Cube

ARCHON: ADMISS

Operating System: VMS
Keywords: • Recruiting • Query facilities

ARCHON: ADMISS tracks prospects by automatically processing the prospect through the admissions stages. Features include on-line query and update, automatic followup and tracking, five value levels for prospects, nontechnical operations, flexible report formats, ad hoc reports, letter-quality printing, flexibility to meet changing requirements, personalized letters, user-defined value levels, controlled feedback, and simultaneous input and output.

A version of this product is available for the PDP–11 computer.

Price: $6650
Contact: Ila Sunshine
(203) 728–6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

ARCHON: BILLS

Operating System: VMS
Keywords: • Accounts receivable • Billing

ARCHON: BILLS solves the ongoing need for controlling funds owed to the institution by the student population or membership. This system provides flexibility to meet unique requirements, ease of use by nontechnical personnel, and immediate access to information. An interactive terminal orientation permits the combination of minimum personnel involvement with timely control of financial reporting. Features include on-line data entry and inquiry, flexible report generation, single entries that charge many bills, accounts receivable aging reports, student account history on file, user-defined transaction types, default answers to speed data entry, transaction batch control, and linkage to financial accounting system. BILLS interfaces with the ARCHON: FRS Financial Reporting System.

A version of this product is available for the PDP–11 computer.

Price: $8280
Contact: Ila Sunshine
(203) 728–6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

ARCHON: FUND–AL

Operating System: VMS
Keywords: • Information management • Mailing lists
• Recruiting • Report writer

The FUND–AL system harnesses the power of data management and combines the flexibility of letter processing to provide a unique fund-raising tool. FUND–AL supplies the personal touch necessary in cultivating an institution's or organization's supporters. It provides solutions to the problems of keeping information on donors and friends current and helps control valuable gift-giving processes.

This system records all important data relative to pledges, payments, and gifts. It also provides current reports on selected prospects, produces pledge reports, and stores biographical details necessary to maintain a close relationship with valuable contributors. A generalized reporting system makes it possible to sort and select small subgroups of donors and prospects. On-line terminals assist in keeping all financial and biographical data current. Inquiry may be made to determine the current status of any individual, and an unlimited number of addresses can be stored for each prospect donor.

A version of this product is available for the PDP–11 computer.

Price: $14,300 – $56,300

Contact: Ila Sunshine
(203) 728–6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

ARCHON: STUDENT

Operating System: VMS

Keywords: • Data base management • Scheduling

This student information and on-line registration system integrates information on total enrollment with data management to provide great flexibility. Competitive and financial pressures dictate increasingly sophisticated management reporting. STUDENT answers with fast on-line inquiry and a do-it-yourself report generator. STUDENT strikes a balance between computer-oriented repetitive tasks and the requirement for human intervention.

Features include on-line terminal entry, create-it-yourself reporting, customized data definitions, preregistration any time, course-overflow checking, class lists on request, student schedules, grade reports, transcript labels, teacher workloads, class rank by year, nondeposited students, student housing director, and a menu-driven system.

A version of this product is available for the PDP–11 computer.

Price: $8800

Contact: Ila Sunshine
(203) 728–6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

Attendance

Operating System: VMS
Keywords: • Scheduling

The Attendance packages are created from the scheduling file and interface with scheduling and registration files. Period-by-period absences, tardies, and dismissals in user-defined categories are recorded. Daily attendance lists show the student name, the periods absent, the initials of the teacher recording the absence, and the total number of days for each period. Total absences, total consecutive absences, and half-day absences are calculated and reported. A counselor's report lists all classes missed for every student assigned to the counselor. A summary list for each teacher shows names and dates of absences for each period taught by the teacher. Monthly and yearly end summaries print total dates and day-of-week absences for every student in every period. Input is from cards or screen. The cumulative figures are automatically updated as information is entered. Inquiries by day display the student's schedule and indicate, after each period, whether the student was tardy, suspended, absent, and so on. Utilities exist to do file maintenance and updating.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Edward J. Mackniak
(800) 243–3177
SYSTEMS ELEVEN, INC.
Middlebury Hamlet
Middlebury, CT 06762

CAS (Courseware Authoring System)

Operating System: MicroVMS, VMS
Keywords: • Computer-aided instruction • Forms management • Graphics

Distribution media: 9-track 1600 bpi magnetic tape, RC25, RK07, RL02, RX50.

This system combines a powerful, easy-to-learn authoring language with a user interface and a utility package for developing, delivering, and monitoring computer-based instruction. CAS requires a GIGI (VK100), VT125, VT240, or VT241 terminal.

CAS components include the authoring language compiler, run-time library, user interface, utilities, and a computer-based instruction lesson on DIGITAL Authoring Language (DAL).

- DAL is a high-level programming language for computer-based instruction. DAL features special response-judging capabilities, including a spelling algorithm, logging of lesson performance information, screen addressing, and full graphics integration.
- The run-time library is shared among users for improved performance during lesson delivery.

- The menu-driven user interface provides access to CAS and supports authors, instructors, and students. The menus are tailored to meet the needs of each user type.
- The utilities contain 11 report programs that access data files to produce reports for the instructors and the authors. Reports contain information only for the author's or instructor's group. The reports use both graphics terminal output and line printer output. The reports include student status report, responses to a unit in a lesson, student scores for a lesson, and available lessons.

Refer to SPD #25.95.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $4200 – $7000

Contact: Consult your local DIGITAL sales office (see Introduction).

CAST (Computer-Assisted Self-Training System)

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Computer-aided instruction • Programming tools

CAST is an authoring system for the development, management, and execution of computer-aided instruction (CAI) courseware. The language is designed for inexperienced and experienced designers of computer-assisted and computer-managed instruction.

CAST's vocabulary is a superset of the PILOT language. Special CAST features include the use of split-screen text, limited graphics, the use of any UNIX* process, the use of other scripts as subroutines, the recording of student performance for later analysis, enhanced computational facilities, the generation of random numbers, direct use of external soft-copy documentation in a lesson, and enhanced storage/retrieval capabilities for program variables. CAST allows for pauses (think time) and automatic recueing when no answer is obtained within a definable interval. Multiuser installations are supported. The educational applications of CAST are numerous. CAST is designed to support business and industrial training.

A minimum memory of 64K is required. The system is written in C language. Custom installation is accomplished through telecommunications. CAST is terminal independent and can be used with a mixture of terminals possessing cursor positioning commands. Hard-copy terminals are also supported. TERMCAP is used when available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $400 – $9950

Contact: Maria Rich
(315) 337–1000
MASTER CLASS CORP.
1721 Black River Boulevard
Rome, NY 13440

CBTS–CML (Computer-Managed Learning)

Operating System: MicroVMS, VMS
Keywords: • Computer-aided instruction • Statistics

CML is designed to manage learning activities in an educational environment. The system is menu driven and does not require educators to have sophisticated programming skills. CML provides educational tools that allow teachers and instructors to amplify their own best skills in the development and management of quality learning strategies.

The CML system collects and stores relevant data from the learning environment; diagnoses student progress, based on the achievement of learning objectives; provides practice by allowing students access to self-tests; prescribes remedial learning activities when warranted; maintains secure instructor-prescribed tests; displays student and class progress records on demand; provides student help on request; permits independent testbanking when necessary; analyzes test items when specified; and provides electronic mail communication.

The system can be actively integrated with DIGITAL Courseware Authoring System (CAS) and is incorporated within the DIGITAL Renaissance series.

Price: $15,500 – $18,000
Contact: Alec Stephen
(403) 275–1680
COMPUTER BASED TRAINING SYSTEMS LTD.
6715 8th Street N.E., Suite 135, P.O. Box 4
Calgary, Alberta T2E 7H7
Canada

CLASS — Education Accounts Payable A/P System

Operating System: VMS
Keywords: • Accounts payable • General ledger

This total accounts payable system with complete interface to the general ledger provides a daily listing of checks written; a check balance report by year, month, status, and check number; a check audit report by bank, year, and selected months; a check register sequence by check number or voucher number; a check report by paid date; report and status of voided checks; a voucher proof listing; open-voucher, paid-voucher, and missing-voucher reports; complete voucher registers by company and division; voucher distribution to the general ledger; and a vendor name and address list.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $5000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Education Admission System

Operating System: VMS
Keywords: • Data base management • Information management • Recruiting

This package enables the admissions office to respond immediately to inquiries, to process application documents, and to continually provide current information for the prospective student. Information on the type and number of inquiries, analysis of recruiting efforts, and profiles on accepted students are available as required.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $7000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Education Alumni/Development System

Operating System: VMS
Keywords: • Data base management • Fund raising • Mailing lists • Recruiting

This alumni/development system provides a base for soliciting, acknowledging, and generating mailings for any group. The Alumni/Development System can produce personalized letters, solicitations, gift acknowledgments and receipts, and mailing labels for alumni or donors. A variety of reports can be generated by using the system's reporting capabilities.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $5000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Education Billing and Receivables System

Operating System: VMS
Keywords: • Accounts receivable • Billing

This student billing and receivables system generates billing and statements. Tuition and fee expenses are calculated automatically, based on specifications defined by the institution. Student billing can be handled by individual bills generated at registration and by group generation of monthly statements.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $7000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Education Personnel System

Operating System: VMS
Keywords: • Employment • Personnel

This personnel system monitors job applicants and tracks employees from hiring to termination date. All pertinent personnel information is tracked from the time of application through employment to termination.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $5000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Education Registration System

Operating System: VMS
Keywords: • Information management • Scheduling

This on-line registration system provides inquiry and updating of student information for the registrar. Through single- or multiterminal facilities, preregistration, registration, and add/drop functions are effectively performed. The registrar can generate, update, and print course offerings, course-status reports, closed-class listings, class rosters, and student schedules during the registration process. The timely and efficient processing of demographic data; information for federal, state, and institutional reporting; grade reports; transcript labels; and honor listings are an integral part of the Registration System.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $8000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Educational Financial Aid System

Operating System: VMS
Keywords: • Data base management • Financial analysis

This student financial aid management system for colleges and universities ensures on-line control of the financial aid process. The aid administrator can do budgeting, awarding, award notification, acceptance, cancellation, and disbursement of funds. The Relational Data Base Management System generates reports to efficiently manage financial aid monies.

A version of this product is available for the PDP–11 computer.

Price: $3000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Educational Financial System

Operating System: VMS
Keywords: • Audit • Financial management

This encumbrance system includes budget, cash receipts, journal entries, and general ledger. The system provides clear and complete audit trails for maximum fiscal accountability. All financial reporting is controlled by the designated user offices.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $7000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — Educational Payroll System

Operating System: VMS
Keywords: • Employment • Payroll • Report writer • Taxes

This payroll package for educational institutions provides the accurate and timely information required for writing checks and for preparing federal, state, and institutional reports.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $7000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

CLASS — IMPRS

Operating System: VMS
Keywords: • Data base management • Information management • Programming tools • Query facilities

IMPRS is a relational data base software package that allows both technical and nontechnical users to establish and maintain relational data base systems, interactively generate sophisticated reports, and write fourth-generation high-level programs to support application systems.

IMPRS is designed to increase programming productivity through the use of a complete data-manipulation language. IMPRS also supports several query language interface modules that allow nontechnical users to browse through the data base and quickly produce reports. IMPRS is fully documented and comes with a full complement of utility programs to support the data base and to provide additional flexibility to the user.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $20,000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 East Spruce
Olathe, KS 66061

CLASS (College-Level Administrative Software System)

Operating System: VMS
Keywords: • Data base management • Financial management • Information management • Management

The CLASS system is a fully integrated college-level administrative software system built around the IMPRS relational data base management system. CLASS consists of the following modules: Admissions, Financial Aid, Registration and Records, Financials, Student Accounts Receivable, and Alumni Development.

A version of this product is available for the PDP–11 computer.

Price: $40,000 – $60,000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

COSAS (Comprehensive On-Line Student Accounting System)

Operating System: VMS
Keywords: • Accounting • Billing • Financial analysis

COSAS supports a student billing office maintaining up to 12,000 accounts. The system maintains 1000 user-defined transaction codes that regulate all posting activity. All complex accounting analysis is under software control, thus making operating procedures easy to learn and use.

Features of COSAS include flexible search parameters; retention of all transaction detail on each student account for on-line query; 1-time school semester parameter setup; fast posting of transactions and recurring entry posting feature; transaction edit and deletion; individual account audit and aging analysis; registration financial clearance; individual statement printout for any billing period; receipt/voucher/check number lookup; simultaneous access of 15 offices, with 15 users per office; autoscheduler for non-prime time operations; batch posting interface; external general ledger interface; comprehensive audit trails; variable output site assignment; more than 20 reports; a centralized data base; compact file structure (15 mgb will accommodate all programs and data sets, including 160,000 transactions and biographical data for 3000 students); system status utility for monitoring posting activity; remote diagnostics and support; and self-diagnostic utilities.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $5000
Contact: Jim A. Wilson, Systems Analyst
(205) 837–1630 ext. 215
OAKWOOD COLLEGE
Huntsville, AL 35896

Courseware Design System

Operating System: VMS
Keywords: • Computer-aided instruction • Development tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This menu-driven system for developing computer-based instruction material uses predefined video forms called templates. A template is designed for a user with no programming background.

The system provides three predefined sample templates and the capability to create and modify templates. The sample templates are fully functional and may be used to create multiple-choice, tutorial, or paragraph-comprehension lessons. The product also includes four test templates that can be changed/modified by template developers. The template screen prompts the user to enter lesson information in a fill-in-the-blank manner. A special command allows easy incorporation of separately generated ReGIS graphics within the lesson.

A menu option automatically generates a DIGITAL Author Language (DAL) source program from a C.D.S. lesson. The DAL source program can then be compiled and linked for use with the Courseware Authoring System (C.A.S.). In order to provide scoring and student management functions, the Courseware Authoring System is required.

Refer to SPD #26.58.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1200 – $2000
Contact: Consult your local DIGITAL sales office (see Introduction).

DSMTUTOR (Decision Support Modeling and Tutoring)

Operating System: VMS
Keywords: • Decision support • Simulation • Spreadsheets

This package helps a potential user choose which modeling system, planning language, or spreadsheet suits his/her needs. DSMTUTOR provides a simulation of all the major modeling and electronic spreadsheet packages so that a user can identify the pros and cons of the various packages on a relative basis.

DSMTUTOR educates a non–data processing person in the use of electronic spreadsheets and major modeling systems in order to give him/her an understanding of the differences between the two systems.

A version of this product is available for the PDP–11 computer.

Price: $2500 – $10,000
Contact: Phelim Dolan
(604) 734–8822 or 732–9141 Local 320
CANADIAN EUROPEAN SYSTEMS (SYDNEY DEVELOPMENT CORP.)
P.O. Box 2884
Vancouver, BC V6B 3X4
Canada

EDTCOURSE

Operating System: Independent
Keywords: • Computer-aided instruction • Documentation • Text management

This course introduces novice and intermediate users to DIGITAL's EDT editor. EDTCOURSE operates best on VT100 or similar terminals. The course includes an introduction to the change mode, a section on the EDT keypad, two subsections on how to use EDT (including line mode), an on-line help facility, and an option that shows the system time and date.

EDTCOURSE is clear, easy to use, and demands less memory storage than DIGITAL's course does. The original source code is written in DIGITAL's BASIC Version 2.2 and is adaptable to other versions.

A version of this product is available for the PDP–11 computer.

Price: $300 – $1000

Contact: Christopher C. Biddle
(201) 635–8420
C. C. BIDDLE
740 Fairmount Avenue
Chatham, NJ 07928

ELEX/IMS

Operating System: VMS

Keywords: • Computer-aided instruction

ELEX/IMS enhances the instructor's course of study, manages individual and small-group instruction, monitors and assesses student progress, and provides instructor feedback. The system is used by secondary school teachers, college faculties, and institutional trainers.

Using an instructional software program, the instructor develops support activities and materials to accompany each segment of the course of study. Checkpoints in the program help the instructor determine the student's understanding of the material being taught. A student who needs remedial assistance or a greater challenge is directed to specific activities to meet his/her individual needs. Such an instructional management system supports the instructor, allows more time for instructor/student contact, and gives the instructor control of the educational process.

ELEX/IMS software uses PDP–11 and VAX systems with print and/or video (CRT) terminals to deliver its programs. The central computer is used for providing objectives and directions for course modules, measuring student performance, and keeping student records. The students use print and video terminals to access assignments and to take self-evaluation exercises and instructors' tests.

A version of this product is available for the PDP–11 computer.

Price: $12,500 – $15,000
Contact: Edward E. Boas, Jr., Ed.D.
(609) 654–1100
ELEX, THE EFFECTIVE LEARNING EXCHANGE
P.O. Box 14
Medford, NJ 08055

Engineering Science Program Exchange

Operating System: UNIX* (Berkeley), VMS
Keywords: • Computer-aided instruction • Engineering • Graphics • Simulation

This library of more than 70 computer-assisted learning packages covers topics in aeronautical, civil, chemical, mechanical, electrical and electronic, and nuclear engineering. Most of the packages are engineering system simulations that a student may investigate by interacting with a computer terminal. The programs are written in ANSI FORTRAN IV or BASIC; some are available in both languages. Many of the FORTRAN programs use graphics display.

A package comprises a machine-readable source code and supporting documentation containing information for the teacher, the programmer, and the student. Most of the FORTRAN packages have been run on a PDP–11/40; some of the BASIC packages require translation to IAS BASIC before they will run.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: £20 – £80
Contact: P. A. Tinson, Exchange Coordinator
44–01–980 4811
ENGINEERING SCIENCE PROGRAM EXCHANGE
Faculty of Engineering, Queen Mary College
Mile End Road
London EI4NS
United Kingdom

FINAID

Operating System: VMS
Keywords: • Data collection • Decision support • Financial planning • Report writer

FINAID accesses vital financial aid information, providing data on financial aid amounts available to help in formulating individual grants to students. FINAID is integrated with other ARCHON-family systems for admissions (ADMISS), student records (STUDENT), and student billing (BILLS).

A version of this product is available for the PDP–11 computer.

Price: $7500
Contact: Ila Sunshine
(203) 728–6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

Frontend

Operating System: VMS
Keywords: • Computer-aided instruction • Menu handlers • Query facilities

Distribution medium: 1600 bpi magnetic tape.

This universal front-end program runs as a subprocess and intercepts all terminal I/O to and from an application. Through the use of a simple data file, Frontend can be programmed to modify the user/application dialog. For example, Frontend can provide interactive help in response to a "?" entered while the application is running. Frontend requires no special privileges or installation.

Price: $295 – $395
Contact: Tim Bomgardner
(812) 339–5854
RANDOM ACCESS, INC.
Box 2094
Bloomington, IN 47402

GIS® (Guidance Information System)™

Operating System: VMS
Keywords: • Computer-aided instruction • Decision support • Employment • Presentation aids

This educational and occupational guidance system consists of data bases arranged in files. The 2-year and 4-year college files provide information on more than 3500 institutions. A user's guide explains how to search for a college by various criteria, such as location, major, and cost. The graduate and professional school file is also included. For graduates of colleges and graduate schools, a data base is included that lists corporations having specific hiring goals for new graduates. The financial aid file covers scholarships, work-study programs, and grants for each level of eligibility. The occupational information file details 1025 occupations, including military and civilian jobs. An armed services occupational information file is also included.

The Guidance Information System is available in numerous formats for different needs and offers optional materials to accompany the software. A menu-driven guide provides instructions and enables the user to search through each GIS file.

A version of this product is available for the PDP–11 computer.

Price: $3100 – $20,500
Contact: Sharon F. Smith
(603) 448–3838
HOUGHTON MIFFLIN CO./TSC® DIVISION
P.O. Box 683
Hanover, NH 03755

Grade Reporting

Operating System: VMS
Keywords: • Calculation aids • Data base management • Forms management

The report card data base is created from the scheduling file. Utilities exist for changing or deleting existing records and adding new records to the file. Grades are posted on preprinted class lists by teachers and are entered on line. Provisions also exist for gathering grades, using optical scanning sheets. Grades may be alpha + or –, numeric, or a combination of the two. Report cards include a schoolwide message, comments, and daily attendance for each class. Grade analysis; D, F, and I reports; honor rolls; grade-point averages; and rank in class are calculated. Permanent record labels and mailing labels are produced at the end of the year.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Edward J. Mackniak
(800) 243–3177
SYSTEMS ELEVEN, INC.
Middlebury Hamlet
Middlebury, CT 06762

ISIS (Integrated Student Information System)

Operating System: VMS
Keywords: • Decision support • Financial management • Information management

This menu-driven interactive management information system offers a flexible, turnkey solution to the increasing administrative workloads of educational institutions. ISIS can be adapted to fit the requirements of individual institutions without corrupting system integrity. The modular design of ISIS provides for the flexibility of automating a single administrative function and the phased automation of other administrative areas.

ISIS includes a report generator and covers general ledger, registration, purchase order encumbrance, accounts payable, student accounts receivable, payroll, personnel, financial aid, student inquiry, admissions, housing and maintenance, alumni and development, and placement and inventory.

Price: Available upon request
Contact: Curt Riendeau
(603) 880–6785
COMPUTER MANAGEMENT DYNAMICS, INC.
29 Riverside Drive
Nashua, NH 03062

Menu

Operating System: VMS
Keywords: • Computer-aided instruction • Forms management • Menu handlers • Query facilities
Distribution medium: 1600 bpi magnetic tape.

This general-purpose interactive menu program runs on any type of terminal and processes a hierarchical data base of text, commands, and operations to provide the user with on-line help screens, error processing, and command execution. Menu can execute any DCL command (including @) on behalf of the user. Menu requires no special privileges or installation.

Price: $250 – $395
Contact: Tim Bomgardner
(812) 339–5854
RANDOM ACCESS, INC.
Box 2094
Bloomington, IN 47402

Multi-Tester System

Operating System: VMS
Keywords: • Data base management • Information management
Distribution media: 800/1600 bpi magnetic tape, RL02, RX01, RX02.

This system gives and grades tests on any subject matter by maintaining a data base of questions and data, including question type (true/false, multiple choice, text), question category (Introduction to Theater, World History, Calculus II, and others), question text (unlimited number of lines up to size of text file), answer text if a text question (unlimited number of lines up to size of text file), and question's answer (if not a text question). The system can generate screen tests or paper tests. Questions on tests can be preselected or randomly chosen when the test is either printed or given at the screen. Screen tests have a user-definable time limit. Tests given at the screen automatically print out a test result report for the teacher, showing what questions were asked, what the student's answers were, what the correct answers were, the student's score on the test, and the student's test average. The computer can grade the test and update the student's record in the file. Since test questions can be randomly selected at test time, the computer can allow a student to take the same test repeatedly and record only the highest score to date. Or the teacher can allow students to take

the test without grading them. Then, when the teacher decides that the students are proficient enough (the system maintains a test average for all the times the test has been taken), the system can be directed to begin grading the test. The system also keeps files on classes of students. The information includes the student's SSN, his/her name, the tests he/she has taken and the high score on each test, and other data.

The versatile Multi-Tester System runs on any PDP–11 using FORTRAN IV or VAX using VAX–11 FORTRAN. The system is written in modular form and is easily modified, since source code is available.

A version of this product is available for the PDP–11 computer.

Price: $500 – $700
Contact: Mitchell R. Sowards
(512) 692–0953 (692–3407 after 6 PM Central)
DRAGON SYSTEMS
8746 Wurzbach Road, Suite 203
San Antonio, TX 78240

NUMAILNET

Operating System: VMS
Keywords: • Electronic mail

This program, written in VAX/Pascal, interfaces with the EDUCOM Mailnet communications service for use on DIGITAL's VAX 11/700 computer series, running on VMS Version 3.4 or higher. NUMAILNET is a layered product; no changes are needed to VMS or site code.

This stand-alone package is designed to link campus-based electronic mail systems to support transmissions of messages and documents between people on different campuses who use their own local electronic mail systems. A complete accounting/billing system provides a stand-alone utility for maintaining NUMAILNET accounts and balances. Outgoing mail produces a billing and estimated costs record that can be reconciled when the site receives the MAILNET message charges.

NUMAILNET provides a number of site-dependent options that can be easily changed to receive incoming mail. Those options include invalid addresses and postage-due mail from non-MAILNET sites, receipt of mail only for valid recipient addresses, maintenance of a forwarding-address name file that forwards mail to persons who have changed their VAX account names, and allowances of validated NUMAILNET accounts to access MAILNET.

Price: $750/yr – $950/yr
Contact: Cedric L. Hampton
(312) 492–3682
VOGELBACK COMPUTING CENTER —
NORTHWESTERN UNIVERSITY
2129 Sheridan Road
Evanston, IL 60201

Payroll

Operating System: VMS
Keywords: • Payroll

This comprehensive system accommodates the variations found in the complex school/municipal application. The user defines variable pay cycles as well as deductions and tax shelters, which may be percentages of fixed amounts of gross pay, net pay, or a subset of either. Multiple pay rates of salary amounts may be assigned to any single employee. FICA and other pension plans are calculated on a daily pay rate basis. Distribution of gross wages may be done by percentage of gross pay or by separate pay rates. Multiple distribution accounts may be assigned to each pay rate. The system determines federal, state, and city income taxes, using a table calculation method. Monthly, quarterly, and yearly reports are provided. All interaction is on line.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Edward J. Mackniak or Ray DeVries
(800) 243–3177
SYSTEMS ELEVEN, INC.
Middlebury Hamlet
Middlebury, CT 06762

PLANIT (Programming Language for Interactive Teaching)

Operating System: VMS
Keywords: • Computer-aided instruction • Simulation

This authoring system, which prepares curricula for computer-administered instruction, is designed for instruction, problem solving, drill and practice, computer adaptive testing, computer-managed instruction, team training, embedded training, automated counseling, and interactive simulations.

PLANIT features:

- Full editing and lesson checkout. Authoring aids include ordered and unordered keywords — word stems, misspelling detection, formula comparison, upper/lowercase options, numeric ranges, automatic rounding and record keeping, immediate record search to result in adaptation of subsequent lesson presentation, enforced timing of student responses, differentiated processing for repeated questions, review and browsing options, and on-line calculation and problem solving.
- A full performance audit trail on all lesson administrations. Records are available for on-line inspection, printed reports, or as a data base for an analysis and reporting system.

- Computation capabilities, including all standard algebraic operations, such as expressions, built-in and user-defined functions, expanded and compact notation matrixes, and variable assignments. Notation is academic standard. Summations, iterated statements, full graphs, and so forth result from single-line statements.

A version of this product is available for the PDP–11 computer.

Price: $2950

Contact: Charles H. Frye
(503) 245–3793
FRYE SOFTWARE UNLIMITED
7200 S.W. Burlingame Avenue
Portland, OR 97219

POISE Academic History System

Operating System: VMS

Keywords: • Forms management • Information management

This system provides on-line access to and maintenance of student academic records. Data is transferred from the POISE registration system at the end of each grading period. Calculation of grade-point averages is set up according to institutional specifications. Courses that a student repeats are flagged and can be excluded from GPA calculations. Multipage academic transcripts can be printed selectively or collectively on plain continuous-form paper or on approved preprinted forms. The information printed on each official transcript is grouped by term and year, with semester and cumulative hours earned and attempted and semester and cumulative grade points and grade-point averages. (Transcripts can also be printed in grade or departmental order for evaluation purposes on the VAX.) Details include identification and description of each course, with grade, grade points, and credit hours. The transcript can also include honors and/or degrees earned, the term in which each was earned, as well as transfer credits from other institutions. Detailed transfer information and additional comments can be printed anywhere on the transcript. (The Registration and Academic History systems are combined on VMS; the POISE Registration System is a prerequisite on RSTS.)

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

POISE Admissions System

Operating System: VMS
Keywords: • Information management • Mailing lists

This system allows the staff of the admissions office to generate personalized letters of acceptance or rejection, letters reminding applicants to send specific items required to complete the admission process, and a variety of ad hoc reports to assist in the evaluation of current admission procedures. Maintenance and reporting are handled through data management routines. The type of information captured can be determined by institutional recruiting and reporting requirements. Reports can reflect success rates of various recruiting efforts by source, geographic area, or type of campaign. Applicant information is readily available for registration processing, and information on accepted students can be easily transferred to the student file.

POISE DMS–Plus (the POISE Data Management System) provides the foundation for the Admissions System and is a prerequisite. DMS–Plus enables users to produce additional personalized letters, labels, and ad hoc reports.

The POISE Admissions System (with DMS–Plus) can stand alone or be interfaced with other POISE modules to provide an integrated base of information for administrative processing. Information introduced into the system can be carried forward into all appropriate areas, eliminating redundant entry. Data flows from one application area to another in automatic fashion but under the control of the user. The POISE approach avoids the drawbacks and complexities of traditional data base management systems by providing greater flexibility, speed and simplicity in implementing changes, and ease of use by nontechnical personnel.

A version of this product is available for the PDP–11 computer.

Price: $8000
Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

POISE Alumni/Development System

Operating System: VMS
Keywords: • Fund raising • Information management • Mailing lists

This user-oriented menu-driven system provides multiple screens for data entry, update, and inquiry. Information on graduating seniors can be transferred directly from the POISE Registration System. Solicitations and other mailings can be targeted according to specific locales, majors, donation histories, and so forth. The alumni/development office can easily produce mailing labels, gift acknowledgments,

announcements, and personalized letters as needed. Pledges can be monitored and reminders printed. Donor tracking and matching gifts are handled by the system. Information can be posted to the general ledger if the POISE Fiscal Reporting System is used.

POISE DMS–Plus (the POISE Data Management System) provides the foundation for the Alumni/Development System and is a prerequisite. DMS–Plus enables users to produce additional personalized letters, labels, and ad hoc reports. The Alumni/Development System (with DMS–Plus) can stand alone or be interfaced with other POISE modules to provide an integrated base of information for administrative processing.

A version of this product is available for the PDP–11 computer.

Price: $10,000
Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

POISE Financial Aid Reporting System

Operating System: VMS
Keywords: • Financial analysis • Information management • Report writer

This system provides facilities for processing financial aid applicants and generating associated reports. Award packaging may be performed on line for individuals or groups. Packaging, award acceptance, and fund transmittals may be handled during the registration process if the necessary information is available. The student may accept or reject individual portions of the award package. Awards may be canceled or adjusted at any time. Detailed and summary reports containing fund budget, amount awarded, amount accepted, available funds, and amount transmitted are printed. Award notification letters and additional letters, statements, and reports can easily be produced on an ad hoc or cyclical basis. FISAP report information (Income Distribution of Program Recipients and Information on Eligible Aid Applicants) is generated by the system. The Financial Aid System uses the prerequisite POISE DMS–Plus system for inquiry, update, ad hoc report generation, and so forth and can be interfaced with other POISE modules to provide an integrated base of information for administrative processing.

A version of this product is available for the PDP–11 computer.

Price: $10,250
Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

POISE Fiscal Reporting System

Operating System: VMS
Keywords: • Accounts payable • Financial analysis • General ledger

This system is based on a modified accrual accounting system and operates on the basis of an annual budget. The system includes accounts payable, cash receipts, journal entries, encumbrances, general ledger, and budgetary accounts. Audit trails are available for all transactions. The protection of individual fields or an entire file is determined by the responsible office. Current information is readily available for inquiry or reports. Accounts payable checks are written on either a stub-over or stub-under check form. Listings of outstanding accounts payable and outstanding purchase orders are provided, as are aged accounts payable listings. Adjustment entries are handled through a journal entry file. The system provides for budget adjustments to any account, with affected balances adjusted accordingly. Budget revisions and previous-year budget data are maintained to provide current year-to-date comparisons and to assist in the projection of future budgets. Revenue and expenditure reports and balance sheet reports can be generated on a frequency determined by the institution. The system meets most accounting standards, such as NACUBO and USOE Handbook II.

POISE DMS–Plus (the POISE Data Management System) provides the foundation for the POISE Fiscal Reporting System and is a prerequisite. DMS–Plus enables users to produce additional ad hoc reports. The Fiscal Reporting System (with DMS–Plus) can stand alone or be interfaced with student receivables, payroll, and other POISE modules to provide an integrated base of information for administrative processing.

A version of this product is available for the PDP–11 computer.

Price: $12,000
Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

POISE Payroll System

Operating System: VMS
Keywords: • Payroll

This system includes standard payroll features, with most input reporting and distribution handled through the data management routines. Each individual is allowed standard deductions, miscellaneous deductions, and tax-sheltered annuities. New deductions can be added as needed. The system handles hourly earnings, overtime, contracts, and overload, as well as sick leave and vacation hours. The salaries of contract employees can be controlled by starting and ending dates. Payment will be stopped if the contract balance falls below zero. Student employees are treated as contract employees, with pay cut off at the end of the work/study period. Each deduction can be governed by a cutoff date and/or amount. An individual may work under multiple budget codes. The institution can set up any number of payroll runs a month, with payroll processed on all employees or a selected group. Paychecks can be produced on institutionally designed stub-over or stub-under forms. The system also handles direct deposits and hand-processed checks. The payroll system provides for 1-time pay, termination pay, and irregular payroll runs. Gross pay and employer's share of FICA, EIC, retirement, and other benefits can be posted to the POISE general ledger.

POISE DMS–Plus (the POISE Data Management System) provides the foundation for the Payroll System and is a prerequisite. DMS–Plus provides users with the ability to produce personalized letters, labels, and additional ad hoc reports. Many personnel tracking requirements can be handled through the POISE Payroll System in combination with DMS–Plus. The POISE Payroll System (with DMS–Plus) can stand alone or be interfaced with other POISE modules to provide an integrated base of information for administrative processing.

A version of this product is available for the PDP–11 computer.

Price: $10,000
Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

POISE Student Billing/Receivables System

Operating System: VMS
Keywords: • Accounts receivable • Billing

This system generates bills for tuition, lab fees, and other student charges. Billing is handled individually or grouped through a statement sent each month (to a separate billing address if desired) as well as through a pop-up bill at the end of the registration line. Plain 8½″ × 11″ continuous forms may be used to print the billing statement, with

the mailing address properly aligned for a window envelope. Billing statements contain transaction details, such as tuition fees, miscellaneous fees, student charges, financial aid awards, housing, other debits or credits, and previous balance. Tuition expenses are computed from data in the POISE Registration system. Charges are defined by the institution and will accommodate separate rates for instate and out-of-state students, flat-rate tuition, variable tuition charges based on credit hours, standard and special fees, room and board, scholarships, loans, grants, and other credits fed from a POISE Financial Aid file. Preregistration estimated billings can be printed, with payment retained until the actual billing cycle. POISE sets up one format each for the pop-up bill and the billing statement. Pop-up receipts can be generated as payment transactions are recorded. The system allows for partial payment while maintaining an accurate balance. Transaction details are generally retained during the term, with the previous-balance summary figure carried into the next term for printing on subsequent billings. (On the VAX, the actual period for retaining transactions is up to the customer.)

The Student Receivables System can be interfaced with the POISE-designed general ledger and other POISE modules to provide an integrated base of information for administrative processing. Prerequisites are POISE DMS–Plus and POISE Student Registration/Reporting System.

A version of this product is available for the PDP–11 computer.

Price: $9500

Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

POISE Student Registration/Reporting System

Operating System: VMS

Keywords: • Information management • Report writer • Scheduling

This system includes on-line enrollment, registration and preregistration for multiple terms or semesters, drop/add, class rosters, student schedules, transcript labels, report cards, and the facilities for grading and student reporting. The system provides the input, update, and maintenance of student and course data. Student identifiers are institutionally determined rather than dictated by the software. Enrollment limits can be set for each section. Notification of time conflicts and closed classes are displayed on the user terminal, with overrides allowed for each. The system handles audit and variable-credit courses and late registration. Closed-class lists and other registration management reports are available on demand. Grade entry and update can be

conveniently handled for individual students or entire sections. Validity checks prevent the entry of illegal grades. Grade-point averages, cumulative hours attempted and earned, and so forth, are calculated according to institutional definition. During the formal drop/add period, information on drop/add changes is automatically accumulated and is available for reporting with each drop or add activity. Changes to a student schedule are reflected in automatic adjustment of class enrollment, the student's credit-hour load, and other related data in the student and course files. The VAX version of the system provides prerequisite and corequisite checking, notification of academic and financial holds, open entry/open exit, reserved seats, waitlisting, and display of alternatives to closed classes. (The Registration and Academic History systems are combined on VMS.)

POISE DMS–Plus (the POISE Data Management System) provides the foundation for the POISE Registration System and is a prerequisite. DMS–Plus enables users to produce personalized letters, labels, and ad hoc reports. The POISE Registration System (with DMS–Plus) can stand alone or be interfaced with other POISE modules to provide an integrated base of information for administrative processing.

A version of this product is available for the PDP–11 computer.

Price: $15,000
Contact: Eva Kinnard
(505) 623–8554
THE POISE COMPANY, INC.
201 North Nevada
Roswell, NM 88201

PPBS (Budgeting/GL/AR/AP)

Operating System: VMS
Keywords: • Accounting • Financial management

PPBS provides the central office administrator with a complete fiscal management tool. Financial record-keeping functions are processed on line, resulting in immediate updating of files. Historical data in the current files aids in projecting future budget needs.

The package encompasses a receivables system, a payables system, and a general ledger system. Budget files, vendor files, purchase orders, and expenditure files allow for complete processing. A comprehensive set of reports is available, including federal and state requirements and standard budgetary reports. The package enables the user to implement Handbook II guidelines and to meet state-mandated line-item reporting requirements.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Edward J. Mackniak or Ray DeVries
(800) 243–3177
SYSTEMS ELEVEN, INC.
Middlebury Hamlet
Middlebury, CT 06762

PRSN (Personnel)

Operating System: VMS
Keywords: • Personnel

PRSN, a comprehensive personnel system for schools and municipal agencies, contains demographic, education and medical information, and work experience. Certification status and assignment areas are recorded for the professional staff. Salary and benefit status aid in negotiations and projections. Reports, such as seniority lists, subject-area assignments, cross-certification, and special systemwide directories, are readily produced. A negotiations subsystem allows for fixed rates or percentage increases for each step and level in the salary schedules. Employee attendance is posted to a calendar that appears on the screen, permitting quick visual analysis of absentee patterns. Hard-copy reports are also provided.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Edward J. Mackniak or Ray DeVries
(800) 243–3177
SYSTEMS ELEVEN, INC.
Middlebury Hamlet
Middlebury, CT 06762

Registration

Operating System: VMS
Keywords: • Government • Information management

This complete child-accounting system contains all pertinent information required for state and federal reporting. User-defined fields allow for storing information unique to a school system. Master registration lists by system, school, grade, and so forth are readily available. This system has been designed around guidelines provided by the U.S. Department of Education, state guidelines, and individual school needs. Information in the following categories is stored and readily retrievable: personal identification; family and residence; physical, health, sensory, and related conditions; tuition; mental, psychological, and proficiency test results and related student characteristics; and enrollment, performance, transportation, and special assistance.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Edward J. Mackniak or Ray DeVries
(800) 243–3177
SYSTEMS ELEVEN, INC.
Middlebury Hamlet
Middlebury, CT 06762

SAS (Student Administration System)

Operating System: VMS
Keywords: • Information management • Scheduling

Memory required: 1MB.

SAS covers all major student administrative functions in its six applications: Student Records, Registration, Marks Administration, Attendance Accounting, Student Scheduling, and Governmental Report. SAS supports individual school buildings or entire school districts — large or small.

SAS is a totally integrated set of software. School administrators can tailor the system to suit their schools as SAS is installed. In operation, school administrators have total control over an easy-to-use system that is supplemented by clear help routines. Using their own terminals, administrators make entries or inquiries and obtain instant results.

Price: $20,000 – $55,000
Contact: Grant Gisel, President
(604) 682–0994
SIERRA SOFTWARE SYSTEMS, INC.
1009–1177 W. Hastings Street
Vancouver, British Columbia V6E 2K3
Canada

Scheduling

Operating System: VMS
Keywords: • Scheduling

This on-line interactive system helps the user through the scheduling process from student requests to building the master schedule to printing student schedules. Some features are master schedule building, schedule changes, and class conflict screen; computer scheduling of individual students; generation of daily add/drop lists and updated student schedules; multi–time vector classes; variable class-balancing facilities; course, alternate course, and student priority scheduling; linked or blocked courses; and a study hall subsystem.

The system offers Course Catalog, Student Scheduling, Teacher Catalog, Teacher Schedules, Student Verification, Student Conflicts, Simple Tally, Class Lists, Homeroom Lists, Conflict Matrix, Master Schedule Listing, and many more reports.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Edward J. Mackniak or Ray DeVries
(800) 243–3177
SYSTEMS ELEVEN, INC.
Middlebury Hamlet
Middlebury, CT 06762

Series A HRS (Human Resources System)

Operating System: VMS

Keywords: • Employment • Insurance • Payroll • Recruiting

This integrated system supports college and university needs for payroll processing and personnel and benefits administration position control and labor distribution. This complete payroll processor pays faculty, students, unionized and nonunionized staff, salaried and hourly staff, retirees, and employees on leave. HRS accommodates multiple payrolls for auxiliary enterprises, multiple campuses, and associated hospitals. Payroll features include complete calculation of wages, taxes, withholdings, deductions, vacation and sick pay, and benefits accruals; provides college work-study program earnings; accommodates 9-, 10-, or 12-month appointees; prints checks and check stubs with year-to-date information; separates payrolls for each campus or institution; and offers multiple payroll processing on varied pay cycles, automatic deduction arrears, and automated check reconciliation.

The system aids personnel by recording and reporting appointments, faculty and union relations data, salary administration, affirmative action, career history, leave of absence, and other personnel data. Health, life, and disability insurance; savings bonds; tuition reimbursement; retirement plans; credit union; and housing and meal allowances are provided. HRS supports TIAA/CREF retirement plan options and provides personnel event forms and EEO–6 reports. The system analyzes the costs of mass grade increases and of paying employees, as well as the impact of benefit plan revisions.

Position control, a budget planning and monitoring facility, permits personnel to manage appointments and jobs and to pinpoint areas of concern arising from differences among funds budgeted, encumbered, and expended for salary.

Labor distribution converts payroll activity into accounting journal entries, provides significant operational efficiencies and support information to the accounting and payroll staffs, and reports the audit trail for summarization and conversion of labor detail into accounting transactions.

Price: Available upon request
Contact: Margaret A. Doyle
(716) 467–7740
INFORMATION ASSOCIATES
3000 Ridge Road East
Rochester, NY 14622

Series Z ADS (Alumni Development System)

Operating System: VMS
Keywords: • Fund raising • Mailing lists • Recruiting

This integrated system supports the alumni/development and fund-raising activities of a college or university. ADS functions can:

- Cultivate the constituency through publications to promote involvement
- Create and maintain corporate matching-gift data and profile data on alumni and donors
- Organize a campaign structure and monitor progress at various levels
- Service volunteers with information and forms and monitor progress
- Record, monitor, and acknowledge pledges, payments, and gifts by fund
- Generate phonathon cards, pledge cards, and reminder notices
- Produce personal letters through word processing support and user-defined ad hoc reports to support all activities
- Satisfy CFAE reporting requirements
- Cross-reference alumni/donor records among individuals and organizations
- Reduce the volume of gift detail by year-end processing to a history file, according to user-defined purge criteria

The Z Writer option provides ad hoc reporting capabilities and supports word processing and mailing label activities.

Price: Available upon request
Contact: Margaret A. Doyle
(716) 467–7740
INFORMATION ASSOCIATES
3000 Ridge Road East
Rochester, NY 14622

Series Z FRS (Financial Records System)

Operating System: VMS
Keywords: • Accounting • Financial management • Purchasing

This integrated fund accounting system is compatible with FASB, NACUBO, AICPA, JAG, and NCHEMS principles and standards intended to support college or university needs. The interactive applications in FRS are financial accounting and accounts payable. Those systems afford greater budgetary control; provide accurate, relevant,

and timely financial information; and generate reports suitable for both overall administration and financial department control. FRS provides the complementary features of a budgetary control system and a fund accounting system, using the same set of input transactions. Simplified input and validation procedures with built-in self-balancing ensure accuracy.

The financial accounting module in FRS provides accounting functions automatically once data is entered into the system. The functions are automatic journal entries, bank account balancing, commitment or encumbrance accounting, automatic budget reallocation, maintenance of budget availability, and budget versus actual comparisons for both current and prior years. Financial accounting consists of fully integrated general and subsidiary ledgers and provides for user-defined account attributes, edit rules, and reporting capabilities. The module maintains accounts on both fiscal and project years, has an easy fiscal year close, and provides error suspense and batch input control.

The system automates the record keeping, control, check creation, and reporting needed to support the accounts payable department. FRS provides greater user control of cash assets by maximizing vendor discounts and improving cash flow. The accounts payable module offers cash and/or accrual basis, discount recognition, automatic encumbrance liquidation, several check-payment methods, extensive input verification and edit, and automatic outstanding-check reconciliation.

Price: Available upon request
Contact: Margaret A. Doyle
(716) 467–7740
INFORMATION ASSOCIATES
3000 Ridge Road East
Rochester, NY 14622

Series Z SIS (Student Information System)

Operating System: VMS
Keywords: • Billing • Information management • Scheduling

This integrated system supports the operations and administrative needs of college or university admissions officers, bursars, registrars, and financial aid officers. The interactive applications simplify and enhance the registration process and student academic record-keeping activities. SIS has four major functions:

- Admissions tracks prospects and preapplicants, processes application and requirements data and subsequent tracking with acknowledgment letters and follow-up notices, supports multiple applications, interfaces with test-scoring services, provides student status on request, and offers standard reports for decisions-making and admissions status reporting, including a statistical summary and a yield report.

- Financial Aid determines eligibility for financial aid through admissions and student records within SIS; processes applications, budget calculations, and awarding of aid funds, and audits and monitors payments; calculates need, using data from CSS, ACT, ETS, and Pell Grant; provides automatic tracking and student budget calculation; generates award notifications and denial letters; provides an audit trail of award transactions; authorizes disbursement feed to BR application; automates packaging through an interface with PARS*; and provides a fund management that controls encumbrances and expenditures.
- Student Records supports on-line and batch registration and stores academic data with drop/add and "quick-admit" processes; provides course inventories with previous enrollment tallies and descriptive attributes; generates camera-ready schedules of classes, personal data, and registration forms; provides calculation and posting of grades for multiple grading rules; updates academic statistical data and cumulative reports at each grading period and after any grade changes; generates transcripts; and supports reporting of faculty load, enrollment, counseling, and class lists.
- Billing/Receivables provides tuition and fee calculation, refunds, automatic application of payments and accounting feed, automated or demand billing, and end-of-term history processing for billed and paid items and suspends invalid transactions.

* PARS is a proprietary product of the College Entrance Examination Board.

Price: Available upon request

Contact: Margaret A. Doyle
(716) 467–7740
INFORMATION ASSOCIATES
3000 Ridge Road East
Rochester, NY 14622

SIGI (System of Interactive Guidance and Information)

Operating System: VMS

Keywords: • Decision support

This system helps college-bound students and students in college make informed career decisions. The system emphasizes not only the decisions but also the process of decision making. SIGI consists of five subsystems, as follows:

- Values: The student examines 10 occupational values, such as helping others, income, independence, and security, and weighs the importance of each one. The student then plays a values "game" to test the validity of the assigned weights and to help redefine his or her value structure.
- Locate: The student puts in specifications and gets lists of occupations that meet those specifications.

- Compare: The student asks questions and gets specific information about occupations of interest.
- Planning: The student gets displays of programs for entering occupations, licensing or certification requirements, and sources of financial aid.
- Strategy: The student evaluates occupations in terms of the rewards they offer and the risks of trying to enter them.

A version of this product is available for the PDP–11 computer.

Price: $2400

Contact: Ray Potter, SIGI Program Manager
(609) 734–5165
EDUCATIONAL TESTING SERVICE
Princeton, NJ 08541

Student Data Base

Operating System: VMS

Keywords: • Data base management • Mailing lists • Personnel

Memory required: 680 blocks.

This relational data base of student data, designed for a college, uses inverted lists, stores personal and course list data for each student, allows complex parenthesized inquiries (using 18 key fields), provides mailing lists for small or large target groups, and facilitates easy data entries and changes. This software is a pseudo–data base in that the data and inverted lists are in arrays during each session and in files between sessions. DECUS number VAX–87.

Price: $5 – $225

Contact: DECUS (see Introduction)

UNIX* System Tutorials

Operating System: UNIX* (Berkeley), ZENIX

Keywords: • Compilers • Computer-aided instruction • Development tools • Operating systems

The UNIX* System Tutorials, developed by User Training Corporation, are a new method of learning the UNIX* system. The series of courses make available at low cost to the user a one-on-one style of instruction. The innovative audiodigital process, using standard audio cassettes, permits live recordings of on-line instructional sessions to be played back to your CRT terminal. The tutorials are an effective way to introduce the UNIX* system to your in-house development or clerical personnel. The UNIX* System Tutorials include courses for both technical and nontechnical personnel, spanning the important topics in the UNIX* system, as well as courses on C programming and the Multiplan® Electronic Worksheet.

* UNIX is a trademark of AT&T Bell Laboratories.

Multiplan® is a registered trademark of Microsoft, Inc.

A version of this product is available for the PDP–11 computer.

Price: $200 (rental) – $476 (rental)

Contact: Lee Tyler
(408) 425–7222
THE SANTA CRUZ OPERATION, INC.
500 Chestnut Street
Santa Cruz, CA 95060

Engineering

Robert Pyle

217 Predict — Equipment Reliability Predictions

Operating System: VMS
Keywords: • Electronic • Manufacturing • Quality control

The 217 Predict system provides the derivation of "predicted" equipment failure rate and mean time between failures, plus system reliability, if applicable, in accordance with the requirements of MIL–STD–756B and based on the part-failure rate derivation techniques of MIL–STD–217. The 217 Predict concept is based on the use of stored "global" (or default) part-failure rate data. The stored part data is used, unless otherwise defined globally or at the part level by the user. This technique provides documentation of the part failure rate parameters used and minimizes part-level entries. The software is also based on the concept of creating an input data file independent of the 217 Predict software, using the 217 Predict sequential data entry definitions and string position or fixed-column position data entry techniques.

A version of this product is available for the PDP–11 computer.

Price: $6000/yr
Contact: Richard H. Butler
(408) 734–4910
SYSCON CORP.
540 Weddell Drive, Suite 1
Sunnyvale, CA 94089

ABAQUS

Operating System: VMS
Keywords: • Civil engineering • Mechanical engineering • Nuclear • Structural engineering

This general-purpose, finite-element-based program is designed for advanced engineering analysis applications. The program has very general geometric modeling capabilities (2- and 3-D continua, beams, shells, trusses, cables, gaps, and so on), a large library of materials (isotropic and anisotropic elasticity, hyperelasticity, hypoelasticity, metal plasticity and visco-plasticity, soils plasticity, reinforced concrete with cracking and crushing, and so on), and a broad range of procedures (static and dynamic stress, transient and steady-state heat transfer, fully coupled temperature/stress, large eigenproblem solutions, Riks method for unstable postbuckling response, impact solution, and so on). All the response history procedures offer automatic time-step selection. The program is designed to be used easily on complex problems and has a simple input language with comprehensive data checking, as well as a wide range of postprocessing (output display) and plotting options.

Price: $1500/mo
Contact: Dr. E. P. Sorensen
(401) 861–0820 Telex: 4990978
HIBBITT, KARLSSON & SORENSEN, INC.
35 South Angell Street
Providence, RI 02906

ABEAM

Operating System: VMS
Keywords: • Civil engineering • Mechanical engineering

The three modules that ABEAM provides are:

- ASCII data of section properties from the AISC manual of steel construction, both the seventh and eighth editions. The following shapes are included: W, M, S, HP, C, and MC; structural tees from W, M, and S shapes; structural L-shapes, single and double; structural tubing, square and rectangular; and structural pipe. For each section, the properties available include area, moments of inertia, radii of gyration, and section moduli.
- A set of FORTRAN subroutines to return the properties in response to the input of a code for the section.
- A FORTRAN program to print out the desired data in response to typing in the name of the beam section — for example, "W14x68."

Price: $195
Contact: Michael L. Bussler
(412) 661–2100
ALGOR INTERACTIVE SYSTEMS, INC.
Essex House, Suite L1, Essex Square
Pittsburgh, PA 15206

ACCOS V

Operating System: VMS
Keywords: • Optics

This interactive lens design and evaluation program for a time-sharing environment can process optical system design and evaluation problems. ACCOS V enables a user to design and evaluate systems having extreme fields of view (greater than 180 degrees), anamorphic lenses, zoom lenses, and systems with titled and decentered components and/or diffraction grating.

ACCOS V features prestored glass data tables (including infrared materials), a lens library facility, and a macro command language. The macro command capability permits users to customize or expand the basic command language.

Price: Available upon request
Contact: Deborah VanDamme
(716) 924–9303
SCIENTIFIC CALCULATIONS, INC.
7635 Main Street
Fishers, NY 14453

ACSL® (Advanced Continuous Simulation Language)

Operating System: VMS
Keywords: • Aeronautics/aerospace • Research • Scientific • Simulation

Memory required: 75KB. Distribution medium: magnetic tape.

ACSL simulates or predicts the future states of continuous physical systems that can be mathematically modeled. Engineers can express their models by using ACSL to integrate nonlinear differential equations or to transfer functions and display the results. Usage includes aerospace/aeronautics, chemicals, power and nuclear reactors, land and sea vehicles, instruments, control systems, robotics, pharmaceuticals, food, environment, and biology.

The system runs in interactive or batch mode and allows on-line interaction with the simulation model. ACLS also follows the standards established by CSSL Technical Committee in 1967. Full FORTRAN compatibility allows any system or user library to be accessed. The system also offers a simple structure with default options for the novice and advanced facilities for the experienced user. Program size is unlimited; any number of names, states, or labels may be used. The system also features low overhead in central processor time and memory use. A dictionary allows symbolic access to variables by SET, DISPLAY, PLOT, PRINT, RANGE, and so on. A choice of integration routines includes the Gears algorithm for stiff systems. The system also performs Jacobian evaluation and calculation of eigenvalues and eigenvectors for control system design. The system automatically determines the steady state or trim operation.

Price: $9500 – $11,400
Contact: Indy Pommers
(617) 369–5115
MITCHELL & GAUTHIER ASSOCIATES, INC.
290 Baker Avenue
Concord, MA 01742

ADINAP

Operating System: VMS
Keywords: • CAD/CAM • Data base management • Mechanical engineering

Memory required: virtual on VMS. Distribution medium: magnetic tape.

ADINAP, written in FORTRAN IV and developed by Adina Engineering, Inc., introduces nonlinear material properties and large displacement effects in piping analysis. The equations developed by von Karman for the flexibility of curved, thin-walled, and circular beams (piping elbows and bands) are generalized in a new 3-dimensional bending element and are solved in the linear-elastic and the plastic regimes. One-dimensional nonlinear truss elements that consider clearance between piping and structures are used to model piping supports and the resulting support failure. Structural damping and snubber effects may be considered in this dynamic response of a piping system to transient, hydraulic, or foundation loads.

Price: Available upon request
Contact: I. W. Dingwell, President
(617) 492–1991
DIS/ADLPIPE, INC.
55 Wheeler Street
Cambridge, MA 02138

ADLPIPE

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Data base management
• Mechanical engineering • Structural engineering

Memory required: virtual on VMS. Distribution medium: magnetic tape.

ADLPIPE, written in FORTRAN IV, is used to analyze complex piping/structural systems. Loadings can be static or dynamic. Stress analysis and stress reports are complete and meet the latest ANSI and ASME codes for power, chemical, and petroleum piping. Plotting capabilities include orthographic, isometric, and stereoscopic plots of the deformed piping system. Input and output can be in English, metric, or SI units. Static structural analysis can be linear or nonlinear.

Price: Available upon request
Contact: I. W. Dingwell, President
(617) 492–1991
DIS/ADLPIPE, INC.
55 Wheeler Street
Cambridge, MA 02138

ANSYS

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering
• Mechanical engineering • Pre- and postprocessors

Distribution medium: magnetic tape.

This computer program for engineering analysis using the finite-element method integrates into one package a preprocessor for mesh generation, many analysis capabilities, several postprocessors for evaluating analysis results, and graphics. ANSYS has the following attributes:

- Preprocessor: Model definition by mesh generation, specifying geometry, digitizing, and interfaces with many CAD systems
- Analysis capabilities: Static — linear, nonlinear included plasticity, creep, temperature-dependent materials, large deformations, and bilinear elements
- Dynamic: Modal (natural frequencies), harmonic response, time history, and nonlinear materials and/or geometries
- Heat transfer: Convection, conduction, radiation, steady state or transient, phase change, coupled to fluid flow, and coupled to electrical flow
- Element library: More than 60 structural and heat-transfer elements
- Postprocessors: Evaluation of analysis results by selectively examining data; plotting distorted shapes, stress contours, isotherms, and graphs; and combinations of load cases
- Graphics: Multiple windows, zoom, different view, perspective, hidden-line geometry and stress or thermal contours, sections, and color

ANSYS has been used worldwide for more than 10 years in the aerospace, automotive, communications, computer equipment, construction, machinery, nuclear, petrochemical, steel, and transportation industries.

Price: Available upon request
Contact: Suzanne C. Batt
(412) 746–3304
SWANSON ANALYSIS SYSTEMS, INC.
P.O. Box 65, Johnson Road
Houston, PA 15342

AOS/MAGNETIC™

Operating System: VMS
Keywords: • Electrical • Electronic • Mechanical engineering • Research

This program calculates the magnetic fields and performance of a wide variety of magnetic and electrical products. AOS/MAGNETIC uses the finite element method, which has proved successful in calculating structural behavior and extends that technology to the analysis of electromagnetic devices. The system computes the magnetic fields, induced currents and losses, and forces of a magnetic device that is representative as an assemblage of finite elements.

AOS/MAGNETIC is composed of two modules. The MAGNETIC module handles the analysis, with the DISPLAY module handling the pre- and postprocessing. The MAGNETIC module computes the magnetic field, induced currents and losses, and forces of a magnetic device. The DISPLAY module allows the user to easily define the analysis model and, after results are obtained, to present the computations graphically.

AOS/MAGNETIC is a means of calculating the field that allows for fringing, saturation, permanent magnets, and complicated shapes. Because the program includes nonlinear B–H curves and computes inductances, forces, and eddy-current losses, it can help the designer to minimize the materials used in a device and to maximize efficiency.

Price: Available upon request
Contact: Nancy J. Lambert
(414) 357–2860
A. O. SMITH DATA SYSTEMS CO.
8901 North Kildeer Court
Milwaukee, WI 53209

APART/PADE Stray Light Analysis Program

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM • Graphics • Optics

This easy-to-use stray-radiation analysis package can accurately model today's advanced optical sensor systems. APART/PADE consists of three main FORTRAN–77 programs that lead the user through a sequence of steps to analyze scattered, diffracted, and/or thermally emitted radiation in complex optomechanical systems.

APART/PADE handles most asymmetric optical systems, including ones with off-axis optical surfaces, folding flats, and even deviating prisms. Baffle systems with elliptical or rectangular image planes and/or pupils can be modeled with little extra effort. All input describing the 3-dimensional geometry of the system is entered into the first program and can be verified with plots from two orthogonal directions or by viewing a 3-dimensional representation of the system from any angle. The second program requires only the specification of the energy transfers to be analyzed, such as source/collector pairs and obscurations. The scattering characteristics of the individual surfaces are entered into the third program, which combines that information with the transfers from the second to form multilevel stray-radiation propagation paths to the detector plane.

The execution of the APART/PADE programs under VAX/VMS has been simplified by the inclusion of an interactive prompting command procedure. In addition, several smaller programs are supplied that postprocess the data files created by the main programs. For example, one takes the device-independent 3-D plot files and then displays the system from any viewing direction on a variety of graphics devices.

Price: $2500/mo – $60,000
Contact: Alan W. Greynolds
(602) 795–7885
BREAULT RESEARCH ORGANIZATION, INC.
4601 East First Street
Tucson, AZ 85711

APT (Automatically Programmed Tools Software)

Operating System: VMS
Keywords: • Numerical control • Pre- and postprocessors • Process control • Production control

The APT code is one of the most widely used software tools for complex numerically controlled (N/C) machining. APT is used to denote both a language and the computer software that processes that language. This problem-oriented language is for writing machine tool instructions and geometry definitions that become a part program. The APT part program is processed by the APT software to produce a cutter location (CL) file that may then be processed by user-supplied postprocessors to convert the CL data into a form suitable for a particular N/C machine tool. This offering of the APT system represents an adaptation, with enhancements, of the public domain version of APT IV/SSX8 to the VAX–11/780 for the Engineering Services Division of the NASA Goddard Space Flight Center.

Price: $2500/10 -yr lease
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

ASAS (Atkins Stress Analysis System)

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM • Mechanical engineering • Nuclear

Memory required: 1 megabyte of core memory. Distribution media: disk cartridge, magnetic tape.

This system, written in ANSI Standard FORTRAN, uses the finite element method to analyze the behavior of engineering structures and components. Designed by Atkins Research and Development Company for engineers, ASAS provides solutions for linear elastic, static, and dynamic structural analysis and steady-state heat conduction. ASAS has been used since 1971 and has an international reputation for its ease of use, reliability, and cost effectiveness. The multilevel substructure facility in ASAS provides the ability to create, in separate runs, various parts of a structure that can then be assembled in a variety of

ways and at a number of assembly levels to produce a model of the complete structure. ASAS also provides a wide range of elements: frames and grillages, membranes for both plane stress and plane strain, plates, 3-dimensional and axisymmetric solids, thin and thick shells, a unique range of force- and stress-based membranes, and crack tip and sandwich elements. Pre- and postprocessing with graphic display are also included.

Price: $500 – $1500

Contact: Tony Firmin
(416) 447–5535
H. G. ENGINEERING
260 Lesmill Road
Don Mills, Ontario M3B 2T5
Canada

ASP (Analytic Scratch Pad)

Operating System: VMS

Keywords: • Calculation aids • Mathematics • Scientific

Developed by Froogl Software, this simple-to-use mathematical problem-solving program is for the scientist, the engineer, and the analyst. If you can write your mathematical problems and expressions on a scratch pad, you have the knowledge required to use ASP. You may use up to 30 characters, including embedded blanks, to designate each item in an expression. One expression can refer to another expression; thus, you can break up your mathematical expressions into convenient sets.

Price: $7500

Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

Aspen Plus™

Operating System: VMS

Keywords: • Chemical • Petroleum • Process control • Simulation

Memory required: 2MB minimum. Distribution medium: magnetic tape.

Aspen Plus simulates chemical process flowsheets to evaluate alternatives during development and to improve the operation, productivity, and profitability of plants. This product serves such areas as chemicals, petroleum, petrochemicals, pulp and paper, metals and minerals, and foods and biomaterials.

Aspen Plus performs steady-state material and energy balances, estimates equipment and capital costs, and predicts project economics and profitability. Written in FORTRAN, Aspen Plus is the only process simulator that can handle coal or other solids in streams. Aspen Plus also handles electrolytes. The new Aspen Plus Costing System, which can be used stand alone or be fully integrated with Aspen Plus heat and material balance calculations, provides a fast and inexpensive way to calculate costs and to evaluate the profitability of a project.

Aspen Plus supplies a comprehensive library of 24 general-process unit operation models; or, you can easily include your own models. A library of physical-property models is also supplied for phase equilibria, thermodynamic properties, and transport properties. The petroleum pseudocomponent capability makes Aspen Plus particularly effective in characterizing data for petroleum. Property constants for more than 400 conventional components and 350 solids and electrolytes components can be called automatically from a data bank. A data-regression system is supplied to determine any property constants from laboratory data.

Price: Available upon request
Contact: Howard J. Herzog
(617) 497–9010
ASPEN TECHNOLOGY, INC.
251 Vassar Street
Cambridge, MA 02139

AUTO–CHEM

Operating System: VMS
Keywords: • Chemical • Data collection • Instrumentation • Process control

AUTO–CHEM provides architectural design services to industrial-instrumented analysis laboratories for speed, accuracy, and longevity of instrumentation. AUTO–CHEM computerizes multiinstrumented analysis laboratories.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $30,000
Contact: David L. Schroeder
(412) 776–3130
PROCESS CORP.
163 Thorn Hill Road
Warrendale, PA 15086

Autoart

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Graphics

This interactive graphics program designs hybrid MIC layouts. Autoart, with its companion program, Super-Compact, can provide automatic mask generation from an electrical design as specified in Super-Compact's design language. Autoart automates the production of artwork and drives many types of CAD mask-making machines.

The designer can use NODE mode commands to edit the design, using microwave terminology. The displayed layout is redrawn as changes are requested. Final adjustments, including the addition of registration targets, circles, lettering, vias, and bias lines, can be made before sending the design to mask-making hardware.

Price: $15,000 – $20,000
Contact: Henry Wong
(415) 966–8440
COMPACT SOFTWARE, INC.
1131 San Antonio Road
Palo Alto, CA 94303

BANDER (Bandwidth Reducer for Stress)

Operating System: VMS
Keywords: • Mechanical engineering

BANDER reads a STRESS–11 input file and computes the bandwidth first and then reorders the joints so as to minimize the bandwidth of the structure. The program produces an output file for STRESS–11. That program will not affect the joint numbers or member numbers previously assigned on the model. BANDER modifies and rearranges the node numbers internally only.

A version of this product is available for the PDP–11 computer.

Price: $250
Contact: Manny Velivasakis
(212) 889–3130
LEV ZETLIN ASSOCIATES, INC.
95 Madison Avenue
New York, NY 10016

BATCHFRAC™

Operating System: VMS
Keywords: • Chemical • Pharmaceutical • Process control • Simulation

This batch distillation simulation program solves the unsteady-state heat and material-balance equations that describe the behavior of both 2-phase and 3-phase multistage batch distillation columns. BATCHFRAC runs on any system with FORTRAN and at least 1MB of virtual memory. Heat and material balances and phase-equilibrium relationships are applied at each stage. A variety of physical property models

are available for calculating enthalpies, liquid densities, vapor fugacities, liquid fugacities, and liquid activity coefficients. In addition, simplifying assumptions of constant relative volatility and/or constant molal overflow may be used. The column-describing equations are solved by a variable-step algorithm especially designed to handle stiff systems.

Calculations can be made to match or predict plant operations. Flexibility criteria for stopping each step, such as a distillate purity or stillpot temperature, can be specified while certain column operating conditions are held constant. Feed reservoirs, sidedraw accumulators, tray heat exchangers, heat-loss profiles, pressure profiles, and tray holdups may be specified.

Price: Available upon request
Contact: Howard J. Herzog
(617) 497–9010
ASPEN TECHNOLOGY, INC.
251 Vassar Street
Cambridge, MA 02139

BDARE: Dynamic-System Simulation in BASIC

Operating System: VMS
Keywords: • Chemical • Education • Research • Simulation

This software package supports VT–11 and VS–60 graphics, permits multirun simulation studies (for example, parameter optimization), and is well suited for interactive experimentation, since there are no delays for compilation and loading. BDARE offers either Runge-Kutta-Heun or Runge-Kutta-Merson (variable-step) integration.

A version of this product is available for the PDP–11 computer.

Price: $110
Contact: G. A. Korn
(602) 298–7054
G. A. AND T. M. KORN, INDUSTRIAL CONSULTANTS
6801 E. Opatas Street
Tucson, AZ 85715

Beambuilder

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Graphics • Structural engineering

Civil and structural engineers can use the Beambuilder 3-D interactive graphics CAD system to build finite-element beam models directly on the graphics screen. Loads, boundary conditions, section properties, material designations and end releases can be added and edited as well. All data can be placed on the screen directly with the cursor or by coordinates. True 3-D capability allows screen editing of the model and its associated data. The final output is a complete FEM beam element

file. Extensive symbol capability lets the engineer store substructures for future use and for accelerated model construction. Color is used extensively to differentiate member types loads, boundary conditions, and more. Small arrows may be shown with each member to illustrate the beam's orientation in space.

Price: $2500

Contact: Sales Manager
(412) 661–2100
ALGOR INTERACTIVE SYSTEMS, INC.
Essex House, Suite L5, Essex Square
Pittsburgh, PA 15206

BEASY (Boundary Element Analysis System)

Operating System: VMS

Keywords: • Automotive • CAD/CAM • Civil engineering • Mechanical engineering

BEASY, written in FORTRAN–77, is a general-purpose program that uses the boundary element method in solving engineering analysis programs. BEASY has major applications in the aeronautic, automotive, civil engineering, mechanical, and offshore engineering industries.

BEASY's mesh generation is very simple and easy to learn, thereby reducing data preparation time. More accurate solutions provide more reliable design at a reduced real cost. BEASY solves infinite and semi-infinite boundary problems accurately.

BEASY can solve 2-D, 3-D, and axisymmetric problems in linear static stress analysis and linear steady heat transfer analysis. Options are available for solving problems in time-dependent potential and elastic-plastic stress analysis.

Comprehensive support and maintenance service are available.

Price: $50,000

Contact: Dr. R. A. Adey
(617) 933–7374
COMPUTATIONAL MECHANICS INC.
400 West Cummings Park, Suite 6200
Woburn, MA 01801

BOSOR4 (Buckling of Shells of Revolution)

Operating System: VMS

Keywords: • Aeronautics/aerospace • Civil engineering • Mechanical engineering • Structural engineering

Memory required: 5000 blocks.

BOSOR4, written in FORTRAN–77, performs stress, stability, and modal vibration analysis of complex, branched, and stiffened shells of revolution made of elastic material and can be used to analyze prismatic shells and panels. BOSOR4 performs moderately large-deflection axisymmetric stress analysis, small-deflection nonsymmetric stress analysis, modal vibration with axisymmetric nonlinear prestress included, and buckling analysis with axisymmetric or nonsymmetric prestress. Symmetric and nonsymmetric buckling modes can be found. Provision is made for realistic engineering details, such as eccentric load paths, internal supports, arbitrary branching conditions, and a library of wall constructions, including layered orthotropic with temperature-dependent material properties.

The program is divided into three processors. The user provides input data in an interactive mode. Extensive help prompts and definitions are available. The program plots prebuckling state and buckling or vibration mode shapes. BOSOR4 will also find response to harmonic excitation, including buckling. Restarts are permitted.

BOSOR4 is based on thin-shell theory and finite difference energy minimization. Fourier superposition is used for circumferential variable. The Newton method is used to solve nonlinear prestress equilibrium. Inverse power iterations with spectral shifts are used for eigenvalue extraction. Lagrange multipliers are used for constraint conditions.

Extensive user-friendly features make provision of input data easy and reliable. The interactive input session generates an annotated file that can be used for documentation and for input. A special utility makes updating a case much easier.

Price: $1000 – $2000

Contact: Dr. David Bushnell
(415) 858–4037
LOCKHEED PALO ALTO RESEARCH LABORATORY
3251 Hanover Street, Department 92–50, Building 255
Palo Alto, CA 94304

BOSOR5 (Buckling of Shells of Revolution)

Operating System: VMS

Keywords:
- Aeronautics/aerospace
- Civil engineering
- Mechanical engineering
- Structural engineering

Memory required: 5000 blocks.

BOSOR5, written in FORTRAN–77, performs axisymmetric collapse and nonsymmetric bifurcation buckling, including elastic-plastic material and creep. BOSOR5 does not replace BOSOR4, as BOSOR5 has no modal vibration capability or linear nonsymmetric stress analysis capability. Segmented or branched, multimaterial, stiffened shells can be found. The wall may be layered. Smeared stringers and smeared or discrete rings are permitted to go plastic. BOSOR5 performs static

analysis. The strategy for solution of the nonlinear prebuckling problem is such that the user obtains reasonably accurate answers even if large load or time steps are used. The strategy is based on a subincremental iteration method, whereby the size of the subincrement is automatically determined, so that the change in stress is less than a certain prescribed percentage of the effective stress. Discrete rings of arbitrary cross section are considered to be assemblages of thin rectangular elements.

Input is interactive, as with BOSOR4. BOSOR5 has several processors, each of which has interactive input with extensive help information for each datum. A plotting capability is provided, as with BOSOR4. Welding distortions can be simulated by application of thermal cycles.

BOSOR5 is based on thin-shell theory and finite difference energy minimization. Trigonometric variation is assumed for circumferential variable. The Newton method is used to solve nonlinear prestress equilibrium. Inverse power iterations with spectral shifts are used for eigenvalue extraction. Lagrange multipliers are used for constraint conditions.

Extensive user-friendly features make provision of input data easy and reliable. The interactive input session generates a completely annotated file that can be used for documentation and for input. A special utility makes updating a case much easier.

Price: $1000 – $2000

Contact: Dr. David Bushnell
(415) 858–4037
LOCKHEED PALO ALTO RESEARCH LABORATORY
3251 Hanover Street, Department 92–50, Building 255
Palo Alto, CA 94304

BRG (Bearing Life Calculations)

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Calculation aids • Manufacturing • Mechanical engineering

Memory required: 64K minimum.

This program, written in MACRO, calculates bearing life versus load for ball, roller, and tapered roller bearings. The four variables are bearing life in B–10 hours, radial load on the bearing, bearing catalog rating, and bearing r/min. When any three of the four variables are supplied, the fourth variable is then calculated. The formulas used in this program are recommended by the American Bearing Manufacturers Association.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

BRIDGE — Integrated Bridge Design System

Operating System: VMS
Keywords: • CAD/CAM • Construction
• Structural engineering

This flexible, easy-to-use integrated system consists of many subprograms that can be used together to analyze and design the superstructure and substructure of any deck-type, simple-span highway bridge. Design subprograms include reinforced concrete slabs, rolled beams, plate girders, prestressed concrete beams, reinforced concrete piers, abutments, and retaining walls. Because the subprograms share a design data base, the solutions determined by each design phase need not be reentered. A minimum amount of input data is needed to arrive at the total solution.

BRIDGE is based on the latest provisions of the AASHTO specifications for loading and stress computation, as well as all pertinent design details.

Price: $5000
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

CADAT (Computer-Aided Design and Test)

Operating System: VMS
Keywords: • CAD/CAM

CADAT is a 21-state simulation tool supporting design verification and test generation for electronic products. The system covers both printed circuit board and integrated circuit applications. CADAT features more than 90 classes of primitive elements, a behavioral modeling language for user-defined primitives, and a high-level language used to describe stimulus input. Nodal contention analysis, spike analysis, and interactive waveform display output are also provided. Concurrent fault simulation, automatic statistical fault sampling, fault collapsing and undetectable fault elimination, and single-fault trace analysis are supported. By providing a single tool that supports both design and test simulation, CADAT permits design data to be "recycled" as the basis for a manufacturing test, substantially reducing the effort required to generate the test program.

Price: Available upon request
Contact: Elizabeth R. Toronto
(201) 848–8000
HHB–SOFTRON
1000 Wyckoff Avenue
Mahwah, NJ 07430

CAEPAC

Operating System: UNIX* (Berkeley), VMS
Keywords: • CAD/CAM • Mechanical engineering • Simulation

Memory required: 1.5MB. Distribution media: diskette, magnetic tape.

This system, written in FORTRAN, integrates an interactive true solids modeler with an automatic finite element surface mesh generation capability. The technique is constructive solid geometry (CSG), whereby the user inputs fundamental volume primitives, such as torus, sphere, cylinder, and others, and operators, such as extrude, union, and intersect, to build the final object. Since the solid model is true, accurate mass properties can be calculated from an exact geometry.

Automatic surface meshing is featured, using geometric input from the solids modeler. The finite element modeler is also interactive and interfaces to commercially available finite element analysis programs, such as NASTRAN, MARC, ANSYS, and others.

Parts can be inspected in several views simultaneously, sectioned, rotated, and assembled. Graphics include 3-D color shading, 3-D outline views, hidden line suppression, and 2-D section views. Also featured are on-line documentation, user-programmable function keys, and batch mode capability. Developed for micro- and minicomputers, CAEPAC turns a desktop system into a stand-alone design workstation.

CAEPAC allows an engineer to develop an optimized model quickly. By simplifying mechanical product design through computer simulation, the engineer becomes more productive by evaluating more design alternatives in less time.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $29,000
Contact: Terry Binion
(404) 395–7844
CAETEC SOFTWARE, INC.
5 Dunwoody Park, Suite 109
Atlanta, GA 30338

CAPS — Section Properties Program

Operating System: VMS
Keywords: • Calculation aids • Graphics
• Mechanical engineering

Memory required: 19K.

CAPS calculates properties of an arbitrary cross-section and handles both open and closed sections. The program calculates area, moment of inertia, centroid, torsional resistance, and other section properties and can be used either with or without a digitizing tablet for data input. Output consists of a graphic plot of the section and calculated section property data or a formatted output file to be used as input to other programs, such as FEA. Various options permit plotting thickness as well as scaling and labeling of sections.

CAPS is written in FORTRAN and uses PLOT10 graphics protocol. CAPS can be distributed over phone line, disk, or tape. Yearly maintenance, support, and updates are available for $600.

A version of this product is available for the PDP–11 computer.

Price: $4800
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

CBUMP — Automotive Bumper Dynamic Impact

Operating System: VMS
Keywords: • Automotive • Calculation aids
• Structural engineering

Memory required: 15K.

CBUMP, a program for calculating the phenomenon of impact for automotive bumper systems, is a tool to initially size bumpers and predict the optimum energy absorber device. The system can work for a variety of bumper shapes and predicts such information as peak force, deflection, absorber, damping coefficient, and both normal and shear stress in the bumper beam. The program automatically calculates information for various "hit" locations and can handle any velocity of impact. CBUMP includes solutions for PGM, Delco, or EVA Egg Crate absorbers; graphics output; and can be run interactively.

CBUMP is written in FORTRAN and uses PLOT10 graphics protocol. The program can be distributed without a source code over phone line, disk, or tape. Yearly maintenance, support, and updates are available for $1800.

A version of this product is available for the PDP–11 computer.

Price: $16,500
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

CDIG — Graphics Digitizing Program

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers • Graphics
Memory required: 19K.

CDIG, a graphics driver used to digitize grid points and output the data in finite element format, permits digitizing in two views and merges the data in a 3-dimensional format. CDIG is used in conjunction with our CMODEL, CAPS, and CPLOT programs.

CDIG is written in FORTRAN and uses PLOT10 graphics protocol. Yearly maintenance, support, and updates are available for $200. CDIG can be distributed without a source code over phone line, disk, or tape.

A version of this product is available for the PDP–11 computer.
Price: $2600 – $5400
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

CDS*COGO (CDS Coordinate Geometry System)

Operating System: Independent, MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering • Mapping

This advanced geometry system can be used interactively by engineers, surveyors, architects, and planners with little or no computer experience, to solve virtually any geometric problem. CDS*COGO comes with a comprehensive professional-quality user manual describing the system and its commands. CDS*COGO has been used in land and utility mapping; transportation planning and route selection; right-of-way and land acquisition; highway, railroad, and waterway design; bridge location, planning, and layout; construction surveys and stakeout; site and facility planning; subdivision layout and mapping; airport design and improvement; and structural building, planning, and layout.

Price: $3500
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

CDS*STRESS (CDS Structural Engineering System Solver)

Operating System: Independent, MicroVMS, VMS
Keywords: • CAD/CAM • Structural engineering

This general-purpose structural analysis system enables a user to describe a problem by writing statements specifying the type and size of the structure, the physical dimensions, the loads, and the desired output. The language is easily understood, and the terms used are essentially the same as those for general engineering usage.

CDS*STRESS performs universal applications, such as the solutions for space frames, all types of trusses, rigid frames, building frames, box culverts, tunnel sections, floor systems, curved girder bridges, or almost any structural unit. The system also performs the linear analysis of elastic, statically loaded structures composed of prismatic slender members — members that can be represented by their centroidal axis and analyzed as line elements. The structure can extend in two or three dimensions; at any joint, the members can be pinned or rigidly connected. The solution provides information such as member forces at the member ends, reactions, and joint and support displacements. CDS*STRESS uses the stiffness method for the solutions.

Price: $2500
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

Cephes Math Function Library

Operating System: ULTRIX–32, VMS
Keywords: • Development tools • Language enhancers • Mathematics • Scientific

The Cephes double-precision math function library offers more than 80 accurate mathematical function subroutines in C source code for scientific and engineering applications. In addition to the elementary transcendental functions, the library includes 10 Bessel functions, 9 probability integrals, and several special functions.

Most of the routines use least maximum error polynomial or rational function approximants, which are theoretically more accurate than the machine arithmetic. Thus, accuracy is influenced only by arithmetic roundoff and cancellation. Several analytical equivalent approximations were tested for each elementary function. In some cases, such as the exponential function, cancellation error has been reduced by unusual range-reduction techniques.

Each function has been tested by comparing many points against high-precision check routines that use 144-bit floating-point arithmetic. Test results are given with the description of each routine.

In the proliferation of language compilers offered by third-party software companies, mathematical function routines often receive inadequate design and testing attention. Such problems have been anticipated in this package, resulting in a high degree of portability.

The double-precision library subroutines are written entirely in C language. Only the basic integer and floating-point arithmetic operations and a means of printing error messages are assumed to be available in the host system. The collection of high-precision check routines, available separately, uses some assembly language.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

Civil Engineering

Operating System: VMS
Keywords: • Civil engineering

Memory required: 0.25MB. Distribution media: magnetic tape, RC25.

This software for engineering companies, exploration firms, transportation departments, and others is written in FORTRAN–77 and features:

- Align, for producing engineering drawings of pipelines, transmission lines, and highways
- CIP, for contour interpolation of digital terrain models; data obtained by photogrammetric means and from ground surveys can be used
- Terrain Engineering, for accessing the INFORMAP® II data base and for using the information to perform road design, perspective viewing, volumetric computation, and mass-haul computation
- PAC/IN, INFORMAP® II macros and FORTRAN programs for producing a combined single-sheet drawing showing planimetric, profile, and cross-section views of any map area

Price: $3000 – $18,000
Contact: Sales Department
(713) 240–5000
SYNERCOM TECHNOLOGY, INC.
10405 Corporate Drive
Sugar Land, TX 77478

Civil Library

Operating System: UNIX* (Berkeley), VMS
Keywords: • CAD/CAM • Civil engineering • Graphics • Mapping

This package of interactive programs for the civil engineer, land surveyor, or structural engineer includes a powerful set of graphics programs interfaced to several popular plotters.

The library's main strengths are surveying, mapping, and subdivision design and drafting. Programs were developed and are supported by registered engineers, who stressed simple operation and extensive documentation. Operating manuals use an "example and sketch" instructional technique, ensuring that the engineer or designer will become fully productive in a short time.

Some applications are:

- Traverse geometry: unknowns anywhere, rotation and translation, shape duplicator, fixed-area solutions, map checking, radial and offset stakeouts, and field traverse reduction and adjustment
- Subdivision plotting: full annotation, automatic windowing, automatic parallel-line generation for sidewalks and gutters on improvement and grading plans, and plot preview on graphics display terminals
- Topo reductions: five types, topo traversing, and topo plotting
- Vertical and horizontal stakeout: construction staking with stationing
- Earthwork: site or highway, automatic terrain interpolation and balancing, error control, and section plotting
- Geographical positions: state plane to geographical and vice versa
- Hydraulics: network analysis and backwater curves
- Structural: indeterminate frame, truss, and continuous beams

Approximately 100 engineering users currently dial into CONCAP's computer center or use the library on their own in-house minicomputer/plotter system. The library is also very popular with city and county public works departments.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $30,000
Contact: Ron Sawyer
(415) 635–5750
CONCAP COMPUTING SYSTEMS
Civil Engineering Group
Sixty 98th Avenue
Oakland, CA 94603

CLENS — Automotive Head Lamp Design Code

Operating System: VMS
Keywords: • Automotive • Electrical • Graphics
Memory required: 15K.

CLENS is a code written to predict automotive head lamp optical performance, including light path and light intensity over the total lamp surface and projection field. The program was developed for the design analysis of aerodynamic plastic head lamps. Any 3-dimensional surface lens and reflector can be represented.

CLENS is written in FORTRAN and uses PLOT10 graphics protocol. Yearly maintenance, support, and updates are available for $600. CLENS can be distributed without a source code over phone line, disk, or tape.

A version of this product is available for the PDP–11 computer.
Price: $6200
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

Clientrac — A/E Marketing

Operating System: VMS
Keywords: • Information management • Management • Report writer • Sales analysis
Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

This fully integrated software package manages the business development functions of the architectural and/or engineering firm. Clientrac uses data bases containing historical data on the firm, its clients and prospective clients, and past projects and proposals. The system uses that data to:

- Generate proposals, using either the SF 255 format or a general format that can be customized
- Produce summaries of fees and projects for completion of SF 254 over user-definable periods
- Develop project examples by Profile Code for SF 254 preparation

- Allow analysis of the business development effort by determining the proposal success rate by project type and/or by client type
- Determine the firm's historical record of success in procuring work by client type and project type
- Allow analysis of project profitability by project type and client type
- Generate periodic status reports of outstanding proposals
- Maintain mailing lists and print labels for announcements, newsletters, direct mail campaigns, and more
- Maintain records on competitors, with an analysis of strengths and deficiencies
- Select project experience records for proposal preparation
- Analyze success rate in obtaining work from a particular client or client type
- Produce tickler files for calls due on prospective clients during a definable period
- Analyze a competitor's success rate for a particular client or client type
- Evaluate the firm's record in obtaining work or shortlisting in comparison to a particular competitor

Clientrac handles branch office or subsidiary reporting and can be easily modified to customize reports or input formats.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $4000
Contact: Eugene D. Thayer, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

CLM COGO™ (Coordinate Geometry and Graphics)

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Graphics • Mapping

CLM COGO is a software package for civil engineering, geometrics, surveying, mapping, estimating, design, and inventory. The system features a powerful user-oriented interactive command language, multiple geographic data bases of classified geometric objects and spatial data in double-precision coordinate fields, an interactive digitizer input option, and complete display graphics, plot preview, and plotter drafting. Full-screen editing and word processing of text data are provided. The system may be applied to highway design, subdivision and utility mappings, construction cost estimating, land use planning, site engineering, and other problems involving geometric and spatial data.

A version of this product is available for the PDP–11 computer.

Price: $5000
Contact: C. L. Miller, President
(813) 831–7090
CLM/SYSTEMS, INC.
3654 Gandy Boulevard
Tampa, FL 33611

CMODEL — Finite Element Model Builder

Operating System: VMS
Keywords: • Device drivers/handlers • Mapping • Pre- and postprocessors • Structural engineering

Memory required: 44K.

The CMODEL system includes our CDIG and CPLOT programs as well as a weight generator. CMODEL is the recommended preprocessor for the CONCEPT program.

CMODEL is written in FORTRAN and uses PLOT10 graphics protocol. Yearly maintenance, support, and updates are available for $1000. The software can be distributed over phone line, disk, or tape without a source code.

A version of this product is available for the PDP–11 computer.

Price: $5400
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

COBEAM (Composite Beam/Girder Design)

Operating System: VMS
Keywords: • Architecture • Structural engineering • Mechanical engineering

This program is used to design or analyze single, simply supported composite beams or girders. COBEAM is easy to use and does not require computer experience. Communication between the engineer and the computer is interactive, with all questions displayed in English on the CRT.

The program has default values for items of required input information, thus facilitating and reducing the amount of input data. Since the default values are displayed on the CRT, the user specifies only the data that differs from that assumed by the program.

Composite beams may be specified as interior or exterior, shored or unshored, and with or without a metal deck. If a metal deck is used, it may be placed perpendicular or parallel to the beam or girder. Shear connectors may be studs or channels. Concrete of any weight may be specified. The long-term effect on deflections may be taken into account

by specifying an appropriate creep factor. Full or partial composite action may be specified. Restrictions may be placed on the construction dead load deflection and the nominal size of the W shape to be selected by the program. Loads may consist of construction dead load, superimposed dead load, and reduced live load. Each of those may consist of a uniform load, up to five concentrated and up to three partial or full trapezoidal loads. The weight of the steel beam is automatically considered by the program.

The output is printed in an 8½″ × 11″ format suitable for insertion in an engineer's calculation book. When the design option is used, the output consists of the least-weight W section that meets the required design criteria and imposed restrictions. A summary of the input data, maximum bending moments and stresses, number and distribution of shear connectors, and deflections for the different load cases is also included. When the analysis option is selected, the engineer specifies the W section. If a bottom cover plate is also specified, the program also computes the length of the cover plate, the location of its cutoffs from both ends of the beam, the size and length of end welds, and the size, length, and spacing of the intermediate welds.

A version of this product is available for the PDP–11 computer.

Price: $1500
Contact: Manny Velivasakis
(212) 889–3130
LEV ZETLIN ASSOCIATES, INC.
95 Madison Avenue
New York, NY 10016

COBRA (Computerized Bridge Rating and Analysis)

Operating System: Independent, MicroVMS, VMS
Keywords: • Structural engineering • Transportation

This programming system determines the inventory, operation, and safe-load capacity rating for bridges. Bridge rating is performed by a combination of field inspection and analytical study. COBRA eliminates the tedium of analytical study and substantially lowers the engineering cost of this phase. COBRA uses the AASHTO Bridge Specifications and includes the following bridge types:

- Truss: Ratings are provided for each truss member, as well as for floor beams and stringers. The truss can have simple or continuous spans.
- Girder: Ratings are provided for the main girder, floor beams, and stringers. Spans can be simple or continuous.
- Multigirder: Girders can have simple or continuous spans of composite or noncomposite construction.
- T–Beam: Simple span reinforced-concrete T–Beam bridges.
- Slab: Simple span reinforced-concrete slab bridges.

Price: $1500
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

CODE V™ (Computerized Optical Design and Evaluation)

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Mathematics • Optics • Scientific

This comprehensive integrated program for designing and analyzing optical systems lets users choose between screen-oriented input or a concise command language. In either case, well-chosen default assumptions minimize the amount of input required. Through its well-labeled output and extensive graphics, CODE V communicates optical data in clear, familiar forms.

The optical systems that CODE V can design and analyze include photographic optics, microscope objectives, space-borne systems, laser scanners, holographic head-up displays, spectrometers, and infrared systems, as well as zoom, anamorphic, and tilted/decentered systems. The program also has unique capabilities in MTF-based tolerancing, environmental analysis, partial coherence analysis, gradient index materials, and lens cost appraisal. Most analysis options provide graphical output. Features for modifying and storing lens data and sequences of commands make CODE V easy to use in an interactive environment.

Major updates to CODE V and its documentation are released approximately annually and are included with all forms of license agreements at no additional charge.

Price: $750/mo – $4000/mo
Contact: Darryl E. Gustafson
(818) 795–9101
OPTICAL RESEARCH ASSOCIATES
550 N. Rosemead Boulevard
Pasadena, CA 91107

COGO (Coordinate Geometry)

Operating System: VMS
Keywords: • Civil engineering • Mapping • Mathematics

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

COGO solves problems in plane coordinate geometry, starting from known points and progressing through a series of simple COGO commands. COGO commands input and determine points, lines, areas, tangents, and circular and spiral horizontal curves. The COGO commands are logical and similar to solving the problem by hand.

Major applications for COGO include land surveying, highway design, right-of-way surveys, bridge geometry, and subdivision work. Traverse adjustment commands have been added to the latest version. Plotting is also available.

In practical problems, a user is not dealing simply with points but rather with groups of points that define property boundaries, streets, right of ways, traverses, and so on. COGO allows the user to define and to refer to lists or figures of related points. Up to 9999 figures can be defined and referred to by number to compute intersections, parallel figures, areas, and so on. Operating on a group of points by specifying a figure number reduces the effort required to do a job. The coordinates and figures are stored by the computer in a COGO table. The computer saves that table so that the user can refer to the points and figures in future runs. Each table has a variable length up to 32,000 points. A maximum of 32,000 tables can be saved. People working on several jobs can use separate COGO tables. The VAX version has extensive plotting capabilities.

COGO may be run in either interactive or batch mode. COGO offers a flexible input format consisting of commands and comments. A comment can be on a COGO input record, by itself, or after the last data of any COGO command. A COGO command, which may be abbreviated, is made up of a command name and perhaps some data. Distances, angles, azimuths, and bearings may be typed in as the sum or difference of several terms. Since the input is in free format, the command names or their abbreviations and the data do not need to be in certain columns of an input record.

Error messages are printed near the left margin of terminal output for speed of printing but end in column 72 of line printer output for ease of reading. Complete line annotation with variable letter sizes is provided. Support is available for most standard plotters. Vertical alignment is not available.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $5000

Contact: Robert E. Branch
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 West Plume Street
Norfolk, VA 23510

Computer Guided Probe — Electronic Fault Isolation Package

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Diagnostics • Electronic • Instrumentation

SofTest Inc. has developed the core of a digital guided probe algorithm for automatic test equipment (ATE). The core integrates with existing ATE operating software through modularizing ATE/probe interfaces and through implementing a high-level programming language.

The guided probe diagnoses the failure of a unit under test (UUT). The guided probe works through interaction, asking the test system operator to place a probe or an IC clip on a given point on the UUT. The guided probe software analyzes the data from the probed points. Once the failure has been located, the operator is informed of the location of the failure in both hard and soft copy. The probe handles the difficult situations of wired nodes, large bus nodes, and complex feedback loops.

The guided probe requires information about the circuit interconnects and IC reference data. The circuit interconnect is a list of all UUT components and a list of all interconnections between those components. The IC reference data consists of the logic value (zero, one, or tristate) that should occur at every node for each step in the test program. Signature data may also be used.

The probe package contains software to create the data bases for the circuit description and "learned" nodal data. The circuit description is entered in an English-like language; nodal data is learned by a program that prompts the operator. However, a digital logic simulator can generate those data bases, and the probe can be interfaced to them.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David Schneider
(201) 447–3901
SOFTEST
555 Goffle Road
Ridgewood, NJ 07450

CONBM (Continuous Bridge Beam Design System)

Operating System: VMS
Keywords: • Structural engineering

CONBM designs or analyzes a continuous span bridge according to the AASHTO Bridge Specifications. The program considers both rolled or welded girders with composite or noncomposite construction. Welded girders can have uniform, straight, or parabolic-haunched web depths.

CONBM is simple to use and allows a user complete control of the design process. Output reports include input data verification; section properties; dead-load and SDL moments, shears, and deflections at the twentieth points; maximum LL deflections due to truck and lane loading; maximum/minimum bending and shear envelopes due to LL and pedestrian loads; reactions; actual and allowable stresses; rolled beam and cover plate sizes; top and bottom flange thicknesses for welded girder design; shear connector spacing design data; transverse-intermediate stiffener spacing; and optional influence lines for moment, shear, and reactions.

Price: $2000
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

Concept — Finite Element Code

Operating System: VMS
Keywords: • CAD/CAM • Calculation aids • Graphics • Structural engineering

Memory required: 256K (core) and 1MB (virtual).

This FEA program, written in FORTRAN, analyzes ceramics, composites, and plastic structures. Concept features nonlinear and differentiation between tension and compression modulus capability, is compatible with CAC's other software, and has full postplotting capabilities through the use of CPOST. Concept can run force, pressure, and thermal loads, as well as heat-transfer analysis on beam, plate, and solid elements. The program features calculating and plotting of stresses at both center and edge of the element (part). Solid element stress can be plotted on a cutting plane. The program runs on a computer as small as a 1MB-virtual-memory mini (VAX–730), although the program can also be installed on larger machines for faster turnaround time.

Yearly maintenance, support, and updates are available for $2200. Concept can be distributed without a source code over phonelines, disk, or tape.

Price: $19,500
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

COSMOS

Operating System: VMS
Keywords: • Aeronautics/aerospace • Civil engineering • Mechanical engineering • Structural engineering

Memory required: 2MB. Distribution medium: magnetic tape.

COSMOS is a general-purpose finite element program for the design and analysis of structural and heat-transfer systems. COSMOS consists of a preprocessor mesh generator, an interactive color graphics postprocessor, and structural and heat-transfer analysis programs. The modularity of the system permits easy implementation of modifications and new features and allows the user more flexibility in designing customized versions.

COSMOS solves problems in civil, mechanical, and aerospace engineering; automotive design; shipbuilding; the design of chemical and petroleum components, medical prosthesis devices, and nuclear power plants; and piping. Designed principally to solve linear problems, COSMOS can also solve nonlinear problems.

COSMOS is written in FORTRAN–77; disk space of 150MB to 200MB is recommended.

Price: $4500 – $30,000
Contact: Eileen Stroeber
(213) 452–2158
STRUCTURAL RESEARCH & ANALYSIS CORP.
1661 Lincoln Boulevard, Suite 100
Santa Monica, CA 90404

CP110 Suite of Programs

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering • Structural engineering

Distribution media: 9-track 800/1600 bpi magnetic tape; for MicroVAX/VAXstation, 5¼″ diskettes.

This set of programs, a unique development in the field of computer-aided design and detail of reinforced concrete structures, uses a data base of information in the form of a 3-D building-structure model. That model holds geometry and component and loading criteria, including the results of load distribution, enabling structural elements to be analyzed, designed, and detailed in any order. The building model also uses algorithms to determine the position of steel reinforcement to prevent bar-clashing problems at intersections, resulting in compatible element detailing. Components may be beams of rectangular, T, or L section; columns of rectangular or circular section; and 1- or 2-way spanning slabs.

Element analysis and design are in accordance with the U.K. Code of Practice, CP110. The numerous designer options allow control over the sequence of calculations, bar sizing, and reinforcement location. Analysis and design results are A4 formatted and are readily understood and accepted by third-party checking authorities.

Drawing options include a drafting module that produces plans, sections, and elevations and element detailing for columns and slabs.

This Genesys-based set of programs saves engineering time in the design office and the amount of steel reinforcement used due to accurate curtailment and intersection detailing.

Price: $5000 – $30,000
Contact: Tony Craddock
(0509) 261519
LAMP SOFTWARE LTD.
Loughborough Technology Centre, Epinal Way
Loughborough, Leicestershire LE11 OQE
United Kingdom

CPLOT — Graphics Plotter Program

Operating System: VMS
Keywords: • CAD/CAM • Graphics • Mapping • Structural engineering

Memory required: 25K.

This program uses formatted finite element data for the plotting of elements. CPLOT plots typical FEA elements, such as quadrilateral, triangular, beam, and solid. CPLOT allows 3-dimensional views at any rotational angle, has a shrink capability, and features both an automatic node and an element generator. A mesh generator is also available, and a node and element labeler is featured. CPLOT and CDIG are packaged together under CMODEL to create an excellent preprocessing FEA model-building system for finite element structural analysis. Default output format is NASTRAN. A reformatting program option places data in the CONCEPT format. Conversion formats for other FEA programs are available.

CPLOT is written in FORTRAN and uses PLOT10 graphics protocol. Yearly maintenance, support, and updates are available for $800. CPLOT can be distributed without a source code over phone line, disk, or tape.

A version of this product is available for the PDP–11 computer.

Price: $3600 – $5400
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

CPOST — Postplotter for Finite Element Output

Operating System: VMS
Keywords: • Mapping • Pre- and postprocessors • Structural engineering

Memory required: 40K.

CPOST, the postprocessing plotter for CONCEPT, plots contour deflections and stresses. Deflections in the X, Y, and Z direction can be plotted as well as total magnitudes (vectors). Shear stress and Von Mises stress contours can be plotted from any user-defined viewing angle and for any complete or subset of the model. Plotted stresses and deflections can also be zoomed (blown-up, enlarged) for a section of the model. CONCEPT permits "restarts" so that additional information can be plotted on CPOST without rerunning the complete analysis. CPOST features an outline plotter as well as an option for dotted-line plot of all elements over stress or deflection contours.

CPOST is written in FORTRAN and uses PLOT10 graphics protocol. Yearly maintenance, support, and updates are available for $400. The plotter can be distributed without a source code over phone line, disk, or tape.

A version of this product is available for the PDP–11 computer.

Price: $4400
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

CPS–1 (Contour Plotting System)

Operating System: VMS
Keywords: • Graphics • Petroleum • Scientific

CPS–1 plots contours from gridded or irregularly spaced data points. Operations are activated by commands in the user's input control and data system. Automatic data partitioning permits interpolation of large data sets to very fine grids. Graphic outputs exceeding the dimensions of the plotting system are automatically segmented for reconstruction. The program has its own data management system, complete with file maintenance.

Options available include multiple surface for surface-to-surface algebraic and logical operations, numerical integration, numerical differentiation, profile and cross section, processing of faulted (discontinuous) data, 3-dimensional migration, smoothing and filtering, isometric plots, log data posting for base-mapping, spectral analysis, and grid refinement.

Price: $25,000 – $70,000
Contact: Michael A. Haecker
(512) 454–4797
RADIAN CORP.
P.O. Box 9948
Austin, TX 78766

CSEAT — Seat Frame Analysis Code

Operating System: VMS
Keywords: • Automotive • Calculation aids • Graphics • Structural engineering

Memory required: 16K.

CSEAT is a structural analysis program using closed form solutions to predict the performance of seat structures. The program calculates stress and deflection for a bucket seat, a bench, a seat, or a single- or double-sided latching seat. The program is useful for both automotive and commercial furniture applications. CSEAT features a graphic plot of a force-deflection curve that predicts nonlinear material behavior. CSEAT can be used with CDIG and CPLOT to provide a graphic representation of a seat back.

CSEAT is written in FORTRAN and uses PLOT10 graphics protocol. Yearly maintenance, support, and updates are available for $1200. CSEAT can be distributed without a source code over phone line, disk, or tape.

A version of this product is available for the PDP–11 computer.

Price: $5600
Contact: Pat Glance
(313) 455–2340
CONCEPT ANALYSIS CORP.
9145 General Court
Plymouth, MI 48170

CSM/O/P (Continuous System Modeling and Optimizing Program)

Operating System: VMS
Keywords: • CAD/CAM • Electronic • Simulation

Distribution medium: magnetic tape.

Designed for on-line interactive, transient/AC simulation of continuous systems and processes, this program uses a simple yet versatile application-oriented input language to simulate and evaluate those systems expressed by either an analog block diagram or a set of ordinary differential equations. Program features include a conversational, discipline-oriented input language; several optional integration methods; expanded-element block and function capabilities; graphics output and selective output control; unique AC analysis,

frequency, and phase response plots; on-line file handling and editing; response optimization of linearized systems by parameter iteration under program control; and printout of the "A" matrix and eigenvalues.

The user describes a problem by entering block parameter and interconnection data. Thirty-five block types are available. Realistic system simulations can be obtained by including blocks that simulate noise, backlash, flip-flop, and so forth. Up to six transient response plots can be stored on disk files and retrieved for later use.

Frequency response optimization of a linearized system can be achieved. CSM/O/P allows the user to change the values of the system parameters under program control in order to realize a response closer to the response desired. Optimization is accomplished by varying only the user-selected parameters to maximize a merit function.

A spiral least-squares algorithm minimizes the difference between the desired frequency response and the system's response over a specified frequency interval.

Note: This program requires floating-point hardware and FORTRAN–77.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Carol Kunz, Director of Marketing
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth, S.E.
Albuquerque, NM 87106

CSSL–IV (Continuous System Simulation Language Version 4)

Operating System: VMS

Keywords: • Mathematics • Numerical analysis • Scientific • Simulation

This user-oriented software system assists engineers and scientists to mathematically model, analyze, and evaluate the dynamic behavior of physical phenomena. By providing a set of tools for computer-aided analysis, CSSL–IV lets the user implement a simulation and interactively conduct experiments, collect data, and present that data.

CSSL–IV features include an easy-to-use model-definition language based on the 1967 SCS standard; a powerful translator into FORTRAN–77; extensive numerical analysis support, including matrix methods and advanced integration methods with automatic stiffness detection and accommodation; preprogrammed I/O and graphics options; a fast Fourier analysis subsystem; sampled-data capabilities;

linear analysis tools, including Jacobian, eigenvalues, and steady-state and root locus; empirical function generation; and a powerful MACRO capability.

The user can explore alternatives with minimal software development costs. CSSL–IV's what-if feature simulates decisions and their consequences. CSSL–IV has been successfully applied in such areas as aerospace, automatic control, structural dynamics, nuclear engineering, biomedical systems, chemical processes, communication process control, power utilities, and robotics.

Price: $12,500
Contact: Ragnar N. Nilsen, Ph.D.
(818) 998–7824
SIMULATION SERVICES, DIV. OF NILSEN ASSOCIATES
20926 Germain Street
Chatsworth, CA 91311

CTRL–C

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Graphics • Signal processing • Simulation

Memory required: .5MB. Distribution medium: magnetic tape.

CTRL–C, written in FORTRAN and developed by Systems Control Technology Inc., provides an extensive set of integrated tools for a broad range of control engineering disciplines. For control system design and analysis, CTRL–C provides for state-space techniques or transfer functions, SISO or MIMO, discrete or continuous time domains, and custom command integration. For matrix analysis, tools include algebra operations, decompositions and factorizations, linear equation solvers, transcendental matrix functions, element-by-element operations, and polynomial manipulations. Digital signal processing and estimation needs are met by FFT (and inverse) analysis, MLI, Kalman filtering, signal generation, detrending and windowing, correlations and power spectral density, polynomial multiply/divide, and transfer and coherence functions. A powerful graphics section that replaces graph paper completes the package. Nonlinear simulation needs are handled by ACSL, an interfaced companion package.

Price: $24,000 – $28,000
Contact: John Rodrigues
(617) 369–5115
MITCHELL & GAUTHIER ASSOCIATES, INC.
290 Baker Avenue
Concord, MA 01742

CUGAR2 (Curved Girder Bridge Analysis System)

Operating System: VMS
Keywords: • Structural engineering

Designed for the analysis of curved girder bridges, CUGAR2:

- Computes the necessary joint coordinates and member topology for certain standard framing configurations and automatically computes section properties for the basic section ($n = 10$ and $n = 30$) for both rolled and welded girders
- Allows both positive and negative curvature in the same structure
- Provides optional use of a lateral flange-bending method whereby the unit stresses at the four corners of the I-section are output

Price: Available upon request
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

Curve Fitting

Operating System: VMS
Keywords: • Mathematics • Scientific

The following two programs are included:

- CURFIT fits a given data set to six functions and shows which function best fits the data. The six functions are $Y = A + (B*X)$, $Y = A*EXP(B*X)$, $Y = A*(X**B)$, $Y = B/X$, $Y = 1/(A + B*X)$, and $Y = X/(A + B*X)$.
- POLFIT fits data to a polynomial of order 2 through N.

Price: $150
Contact: Michael L. Bussler
(412) 661–2100
ALGOR INTERACTIVE SYSTEMS, INC.
Essex House, Suite L1, Essex Square
Pittsburgh, PA 15206

DAREP (Differential Analyzer Replacement — Portable), DARE/11

Operating System: VMS
Keywords: • Electrical • Mechanical engineering • Scientific • Simulation

Distribution medium: RK05.

This FORTRAN-based simulation language is for dynamical system simulation — for example, the solution of large groups of differential equations. Line printer and Tektronix plotting routines are available for solution display. Eleven numerical integration routines are available — some with automatic step-size adjustment and error control. Programming is scale-factor free.

Mass storage of problem and solution files is included. Use of a VDU makes possible semiinteractive simulation with run-time alteration of parameters.

DARE/11 runs interactively on DIGITAL PDP–11s with VT–11 graphics and is an RT–11 V2C implementation. For more information, see *Digital Continuous System Simulation*, G. A. Korn and J. V. Wait, Prentice-Hall.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3800

Contact: John V. Wait, Professor
(602) 621–2434
UNIVERSITY OF ARIZONA
Dept. of Electrical and Computer Engineering
Tucson, AZ 85721

DESCTOP (Direct Executing Scientific Computation and Operating Package)

Operating System: MicroVMS, VMS

Keywords: • Research • Scientific • Simulation

DESCTOP, for scientific/engineering workstations and for interactive simulation of dynamic systems, executes immediately on a RUN command without any external compiler or linker. Nonlinear differential equations are solved at about FORTRAN–77 speed, enabling the user to see results of model changes at once. The system directly executes complex-variable, matrix, and vector calculations; includes fast Fourier transform routines; has structured-programming statements (for, while, repeat, if/else, and exit) with automatic prettyprinting; and has value and VAR parameters for procedures.

The complete programming environment includes the DCL command language as a subset, permitting control of a MicroVAX or a PDP–11 workstation. The EDIT command uses a full-screen editor, usually EDT; small jobs can also be entered with automatically supplied line numbers. DESCTOP's engineering-notebook file records users' comments and identification codes for program and data files. The system displays 100-by-80 graphs on unmodified VT100 alphanumeric terminals and 450-by-350 color graphics on Tektronix 4105/7 graphics terminals.

DESCTOP can solve up to twentieth-order differential equation systems on a PDP–11 and 100 or more (compilation option) on a VAX or MicroVAX.

A version of this product is available for the PDP–11 computer.

Price: $360 – $3600

Contact: G. A. Korn
(602) 298–7054
G. A. AND T. M. KORN, INDUSTRIAL CONSULTANTS
6801 Opatas Street
Tucson, AZ 85715

Design Graphix™

Operating System: VMS

Keywords: • CAD/CAM • Graphics

This powerful, user-friendly, flexible, low-cost computer-aided design/drafting package is easy to learn and use. Design Graphix software packages offer a true 3-dimensional data base, multiple-pen and multiple-layer drawing construction, complete geometrics, user-definable symbols and figures, graphics and text editing, numerous text fonts, automatic dimensioning, and bill of materials. The software also features user-definable menus, command file processing, a macro programming facility, and utilities.

In order to minimize the user training cycle and maximize user friendliness and productivity, Design Graphix provides extensive help and automatic training facilities. Operator interaction can be command driven, menu driven, or autoprompting mode. In prompting mode, current parameter values are displayed and may be updated at the operator's discretion. Parameter-value retention and command repeatability also simplify operation.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $29,995

Contact: Larry McCoy
(504) 769–2226 or (800) ESC–CADD
ENGINEERING SYSTEMS CORP.
3636 South Sherwood Forest Boulevard, Suite 400
P.O. Box 80318
Baton Rouge, LA 70816

DIGIMAP

Operating System: VMS

Keywords: • CAD/CAM • Civil engineering
• Facilities management • Mapping

Memory required: 2MB. Distribution medium: 9-track magnetic tape.

DIGIMAP, written in FORTRAN, performs digital mapping, digital terrain modeling (data input, triangulation, contouring, 3-D terrain projections), civil engineering (cross-sectioning, cut/fill, plan/profile sheets), facilities management, photogrammetry, coordinate geometry, and many others. DIGIMAP was designed in a production environment to complete large-scale projects that begin with raw data and end

with finished, accurate, cartographic-quality output. Data can be input from a variety of sources, including existing drawings; aerial photographs, numerous analysis programs for applications, such as earthwork, hydrology, and road design; and a wide range of tape formats. Input data can be assigned up to 32,000 individual information types or layers accessible for display, for editing, and for plotting either individually or in any combination.

An optional module creates a data base of attribute data, common in mapping and facilities management applications. Data is easily stored and retrieved from any location in the data base and is accessible from graphics and alphanumeric terminals. The data base's menu-driven user interface allows access to stored data without requiring detailed knowledge of the data base structure.

Additional modules include:

- AUTODIG — Allows digitized data input from tablet digitizers and stereoplotters
- MEP — Enables preliminary editing to be performed automatically
- PADED — Performs interactive editing, drafting, engineering, and design functions
- PLOFGEN — Generates customized plot files without affecting the data base or requiring user intervention
- PLTDRV — Allows further plot-customization output to various plotters
- DTM — Comprises digital terrain modeling and 3-dimensional terrain projections
- RCOGO — A coordinate geometry program
- Earth — Contains volumetric computations for earthwork

Extensive utility programs and analysis programs, such as hydrology, gas flow analysis, and so forth, are also available.

Price: $50,000 – $95,000

Contact: Jim Winslow
(505) 884–3500
DIGINETICS, INC.
4125 Carlisle Boulevard
Albuquerque, NM 87107

DIGSIM

Operating System: UNIX* (Berkeley), VMS

Keywords: • CAD/CAM • Electronic • Quality control • Simulation

Memory required: 1 to 2MB. Distribution medium: 9-track 800/1600 bpi magnetic tape.

This process-oriented CAE system aids engineers in developing digital PCB and custom LSI/VLSI designs. The user-friendly interfaces use graphics; captured input data is presented as logic diagrams, and output data is presented as wave-form diagrams. Design verification of

logic and dynamic behavior is carried out with simulation, and the resulting data is recorded for further manual analysis or for test-coverage calculations. Communication interfaces to commercially available design tools are provided. The modularized package can fit into workstations in distributed data processing systems.

DIGSIM features an analysis of designs for design rule violations, a test program preparation, a custom circuit layout, and a design documentation. DIGSIM is written in SIMULA, a general-purpose high-level language.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $10,000 – $100,000
Contact: Bengt Magnhagen
+46 013 114010
DIGSIM SYSTEM HB
P.O. Box 10004
Linköping 580 10
Sweden

DIS (Design Information System)

Operating System: VMS
Keywords: • CAD/CAM • Data base management • Mechanical engineering • Structural engineering

Memory required: virtual. Distribution medium: magnetic tape.

This interactive data base system, written in FORTRAN IV, provides total design and data management for piping and structural engineering. DIS can be used as a stand-alone system or can be integrated into all major CAD systems to provide an optimal system. DIS is used to generate a central file of 3-dimensional engineering data representing piping and structural systems. Detailed engineering drawings and bills of material are produced automatically. DIS design-analysis packages permit checks for physical interferences in a pipe, in equipment, and in a structure; fast flexibility and pipe support analyses; steady state; pressure-drop calculations; and nonlinear piping analysis.

Price: Available upon request
Contact: I. W. Dingwell, President
(617) 492–1991
DIS/ADLPIPE, INC.
55 Wheeler Street
Cambridge, MA 02138

DISCOS (Dynamic Interaction Simulation of Controls and Structure)

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM • Mechanical engineering • Robotics

DISCOS was developed for the dynamic simulation and stability analysis of passive and actively controlled spacecraft. The physical system undergoing analysis may be generally described as a cluster of contiguous flexible structures (bodies) that comprise a mechanical system such as a spacecraft. The entire system or portions may be either spinning or nonspinning. Member bodies of the system may undergo large relative excursions, such as those of appendage deployment or rotor/stator motion. The general system of bodies is, by its inherent nature, a feedback system in which inertial forces, such as those due to centrifugal and Coriolis acceleration, and the restoring and damping forces are motion dependent. The system may possess a control system in which certain position and rate errors are actively controlled through the use of reaction control jets, servomotors, or momentum wheels. Bodies of the system may be interconnected by linear or nonlinear springs and dampers, by a gimbal and slider block mechanism, or by any combination of those.

The DISCOS program can be used to obtain nonlinear and linearized time responses of the system, total system resonance properties, and frequency domain response and stability information for the system. DISCOS is probably the most powerful computational tool to date for the computer simulation of actively controlled coupled multiflexible-body systems. The DISCOS user should have extensive working knowledge of rigid-body and flexible-body dynamics, finite-element techniques, numerical methods, and frequency-domain analysis. DISCOS applications have included simulation of the shuttle payload deployment/retrieval mechanism, solar panel array deployment, antenna deployment, analysis of multispin satellites, and analysis of large, highly flexible satellites, including the design of attitude-control systems.

Price: $1800/10-yr lease

Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

DOGS (Design-Oriented Graphics System)

Operating System: VMS

Keywords: • CAD/CAM • Graphics • Mechanical engineering

This comprehensive 2-dimensional computer-aided drafting and design package can produce high-quality technical drawings for many disciplines. DOGS offers financial savings and improved drawing quality. DOGS emulates the procedures and techniques familiar to engineering drafters and designers. DOGS can automatically copy, rotate, scale, and move partial drawings from one location to another and can

store and recall user-defined symbols. Other standard features include automatic bill of materials parts generation, parametric macro language, and interface to NC software.

Price: $15,000 – $30,000

Contact: Jeff Thompson
(615) 584–2117
PAFEC ENGINEERING CONSULTANTS, INC.
5401 Kingston Pike, Suite 610
Knoxville, TN 37919

DSS/2 (Differential Systems Simulator, Version 2, Release 3)

Operating System: Independent

Keywords: • Mathematics • Scientific • Simulation

DSS/2 is a library of transportable FORTRAN IV subroutines for the numerical integration of systems of initial-value ordinary and partial differential equations (ODE/PDEs) with broad application in the computer analysis of large-scale systems in science and engineering.

Seven manuals are available for Release 3: *Introductory Programming Manual* (for ODEs), *An Introduction to the Numerical Method of Lines Integration of Partial Differential Equations, Numerical Method of Lines Integration of Partial Differential Equations in Cylindrical and Spherical Coordinates, Numerical Method of Lines Integration of Partial Differential Equations in Two Dimensions, Numerical Method of Lines Integration of First-Order Hyperbolic (convective) Partial Differential Equations, Variable-Grid Spatial Differentiators in the Numerical Method of Lines,* and *Numerical Method of Lines Integration of Partial Differential Equations in Three Dimensions.* The cost of the seven DSS/2 manuals is $30.00.

The DSS/2 FORTRAN IV source code is available and includes a 9-track tape with the DSS/2 source code and all the problems in the seven manuals, a printed tape listing identifying all files and sections of the tape, the output from 10 test problems for checking the operation of the code on the purchaser's local computer, and a set of the seven manuals. Those four items are mailed by U.S. Priority Mail in the United States and Canada and by international air mail to other countries.

A version of this product is available for the PDP–11 computer.

Price: $250 – $1000

Contact: Dr. W. E. Schiesser, R. L. McCann Professor
(215) 861–4264
LEHIGH UNIVERSITY
Whitaker Laboratory No. 5
Bethlehem, PA 18015

DUCT (Design Using Computer Techniques)

Operating System: VMS
Keywords: • CAD/CAM • Manufacturing • Mechanical engineering • Numerical control

This powerful tool for computer-aided engineering enables a designer to develop a complete surface definition of an object for analysis or to provide manufacturing information. Developed as a design system, DUCT is best used to turn a design concept into a full surface model. Used in that manner, the designer can control and retain details of any modifications.

DUCT helps design engineering castings and moldings and is used to program numerically controlled machine tools for the manufacture of prototypes, patterns, molds, and dies. Applications include the design and manufacture of tooling for combustion engine manifold cores, pump volutes, turbine blades, plastic and glass bottle molds, and plumbing brass foundry, including taps, valves, and other pipe fittings.

The DUCT system of representation is based on planar cross-sections positioned in true cartesian space by means of a 3-dimensional curve, or spine. A graphics terminal can be used to define and modify the model interactively. DUCT has facilities for calculating cross-sectional and surface areas and component volume, thus enabling the user to determine the amount of material contained in a casting or molding.

DUCT can also be used to optimize a design to conform to a volume constraint or, in the case of a turbine scroll, for example, to ensure a uniform decrease in cross-sectional area along the length of the passageway. Another important design feature is the facility for finding complex die-split lines to give satisfactory draft angles. DUCT also has an automatic blending facility to join two adjacent surfaces smoothly. The DUCT surface model can be used to generate a finite element analysis mesh by way of an interactive mesh generation.

DUCT also provides visualization facilities, including first and third angle, isometric, conic projections, and stereo pairs. Finally, when a satisfactory design is achieved, an NC machine tool path can be generated to machine the DUCT surface pattern or mold. DUCT offers economic and technical advantages in designing, visualizing, and manufacturing 3-dimensional components. The VAX version has a number of advanced features, including smoothly shaded color pictures and IGES and UDA standard interfaces.

A version of this product is available for the PDP–11 computer.

Price: £17,000 – £30,000
Contact: E. B. Lambourne
(021) 327–3401
DELTACAM SYSTEMS
Argyle Street
Birmingham B75TH
United Kingdom

EASE2 (Elastic Analysis for Structural Engineers)

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM • Civil engineering • Mechanical engineering

This linear finite element analysis program is used for heat transfer analysis — transient or steady state and convection and heat flux; static stress analysis — mechanical and thermal and multiple and combination loads; natural frequencies and mode shapes — subspace iteration and Guyan reduction; response spectrum (shock) analysis — NRC, CQC, SRSS, and eight combination methods; transient (time history) analysis — mode superposition and direct integration; random response — base or acoustic excitation and response PSD or RMS element stresses; and harmonic response — multiple support excitations and sine sweep or dwell.

The element library has been simplified to include beam, pipe, shell, solid, and axisymmetric element types. Matrix additions can be used to input special element types. Multipoint constraints can be rigid links, interface constraints, or cyclic-symmetry conditions.

The manual is designed for the engineer who wants to create a finite element model and obtain a computer solution without attending training sessions. The sophisticated multipass preprocessor, E2IN, performs mesh generation, plotting, error checking, bandwidth reduction, and core allocation. Since E2IN is a stand-alone program, all data checking can be done quickly and inexpensively prior to submitting the full static or dynamic solution. E2IN virtually guarantees a successful EASE2 run. Translators to and from graphics programs such as PATRAN are available.

Price: $4000 – $6500/yr
Contact: Bob Kirby
(213) 530–3273
ENGINEERING/ANALYSIS CORP.
24050 Madison Street, Suite 211
Torrance, CA 90505

EASYTRAK

Operating System: VMS
Keywords: • Project management

Memory required: 512KB.

This fully integrated schedule, cost, and resource project management system for program managers and their project teams is written in BASIC. EASYTRAK provides menus, prompts, help screens, a switchboard option for commands, and a complete computer-aided instruction course on project management and EASYTRAK. EASYTRAK provides for unlimited projects and activities, networks, multiple calendars, interproject dependencies, global updates, tiered subnetworking, and multiple levels of WBS.

What-if analysis using the real-world constraints of time, resources, and/or dollars is an outstanding feature, as is the full audit trail of changes. Cost reports provide analyses of cash flow and performance measurement and tracking of actuals, budgets, estimates, variances, and earned value. EASYTRAK has sophisticated resource allocation and leveling capabilities, a unique interrogator to perform comprehensive searches throughout the network for maximized exception reporting, and report formatting. Color screen displays and graphical output include Gantt, milestone, baseline, and SAMSO barcharts, curves, histograms, and network diagramming with windowing and zoning capabilities. Work can be scheduled in minutes, hours, days, or weeks in multiple shifts. Color screen graphics and terminal display of reports are standard.

Price: $95,000 – $145,000
Contact: L. G. Worobow
(714) 476–1020
PC INTERNATIONAL
4400 MacArthur Boulevard, Suite 800
Newport Beach, CA 92660

ELAN–AC

Operating System: VMS
Keywords: • CAD/CAM • Electrical • Simulation

Distribution medium: magnetic tape.

This interactive AC analysis program is for circuit designers who need a comprehensive analysis tool. ELAN–AC can analyze large circuits and provide information about circuit performance, including gain, phase shift, input and output impedances, y-parameters, and group delay.

ELAN–AC features include 100-node, 300-branch capability; built-in models for resistors, capacitors, inductors, mutual couplings, independent and dependent generators, transistors, FETs, and OP-amps; user-defined FORTRAN equations for complex modeling and other special calculations; sensitivity, worst-case, and Monte Carlo analyses and simulations, with histogram plots; and coupled tolerances and distributions between elements for realistic simulations of element variations.

ELAN–AC can automatically linearize operating point parameters from previous ELAN–TR or ELAN–REL program analysis. Data from operating points is automatically obtained from previous analyses and inserted as data to ELAN–AC.

A semiconductor data library (ELAN–LIB) and an interactive program for calculating diode and transistor parameters (ELAN–MOD) are available.

Note: This program requires floating-point hardware and FORTRAN–77.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Carol Kunz, Director of Marketing
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth, S.E.
Albuquerque, NM 87106

ELAN–MOD (Transistor and Diode Modeling Program)

Operating System: VMS

Keywords: • Electrical • Simulation

Distribution medium: magnetic tape.

This interactive program calculates diode and transistor parameters for ELAN programs. The user enters data from measurements and/or from a manufacturer's data sheets. ELAN–MOD uses default values when the user does not have appropriate parameter data. ELAN–MOD then calculates the parameters required for ELAN. The user can check, modify, and recalculate parameters until suitable model data is obtained.

Note: This program requires floating-point hardware and FORTRAN–77.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Carol Kunz, Director of Marketing
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth, S.E.
Albuquerque, NM 87106

ELAN–TR (Transient Radiation)

Operating System: VMS

Keywords: • Electrical • Graphics • Nuclear • Simulation

Distribution medium: magnetic tape.

This easy-to-learn but powerful nonlinear analysis program is designed for both the beginner and the experienced user. ELAN–TR features easy-to-use input language and prompts; complete nuclear radiation effects analysis; high-resolution graphics output presentations; a large semiconductor data bank containing approximately 300 devices; linear transconductance models for Beta, Mu, Gm, and Zm; automatic storage and retrieval of problem data from disk files; user-defined FORTRAN equations for additional modeling flexibility; support for users by experienced engineers and computer specialists; interface for further circuit and reliability analysis, using the ELAN–AC and ELAN–REL programs; availability of a semiconductor

data library (ELAN–LIB) and an interactive program for calculating diode and transistor parameters (ELAN–MOD); and additional FORTRAN equations to increase the possible range of analyses.

Note: This program requires floating-point hardware and FORTRAN–77.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Carol Kunz, Director of Marketing
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth, S.E.
Albuquerque, NM 87106

EWO (EARTHWORK) Highway Design System

Operating System: Independent, MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering • Mapping • Transportation

EWO enables a design engineer to solve for the required earthwork quantities for any type of highway. Although intended for highway use, EWO is also applicable to a wide range of civil engineering and transportation problems, such as railroads, dams, airports, waterway and irrigation channels, stockpiles, and borrow pits.

Graphical solutions for plotting constitute a major part of the system and include centerline and offset profiles, cross sections, and mass diagrams. The program also consists of many subsystems that can be used together to provide volumetric or earthwork computations, grade tables, and surface contours.

EWO is designed to transition automatically between points of template change, both vertically and horizontally, and to select the appropriate side slopes at each cross-section station. Output from EWO includes slope intercepts, profile grade tables, even-foot contour tables, cut and fill areas and volumes, and mass-diagram ordinates. Proposed centerline alignments may be different from the baseline to which the ground data is referenced, so any number of alignments or alignment modifications can be easily studied, using the same basic set of original ground data.

Price: $5000
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

EWSG (Electronic Warfare Scenario Generator)

Operating System: VMS
Keywords: • Electronic • Scientific • Signal processing • Simulation

EWSG provides a unique capability to simulate complex electronic environments resulting from scenarios input by an operator, as seen at a receiver. The system includes a model of a receiver system whose characteristics can also be defined by the operator and permits performance analysis of that receiver in the specified environment.

EWSG applies mainly to the defense industry and is aimed at electronic warfare systems designers and integrators.

A version of this product is available for the PDP–11 computer.

Price: £15,000
Contact: J. Palfreyman
0252 544321
SOFTWARE SCIENCES LTD.
Abbey House, 282/292 Farnborough Road
Farnborough, Hampshire GU14 7NB
England

EXP1234 (Exponential Model Fitter)

Operating System: UNIX* (Berkeley, System III, System V), VMS
Keywords: • Biology • Mathematics • Simulation • Statistics

This interactive FORTRAN program sequentially provides weighted least-squares fits of time-series data to sums of one, two, three, and four exponential functions, with a tabular analysis of the quality of all fits, using several statistical criteria — residual tests, F-ratio tests, information criterion tests, and correlation matrices. Five options for entering measurement error variances are provided, with three choices for data weighting. The nonlinear regression algorithm is a second-order gradient search scheme. Program input and output are highly readable and user friendly. Telephone demos are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $350 – $750
Contact: Dr. Joseph J. DiStefano, Professor
(213) 825–7482 or 825–4033
UNIVERSITY OF CALIFORNIA, LOS ANGELES
School of Engineering and Applied Science
Biocybernetics Laboratory, 4731K Boelter Hall
Los Angeles, CA 90024

FAAST (Fluid Analysis and Simulation Technique)

Operating System: MicroVMS, VMS
Keywords: • Civil engineering • Flow analysis • Mechanical engineering • Simulation

Memory required: 200KB.

This powerful and flexible fluid flow analysis system, developed by GCN/Hydronet Services, solves steady-state and time-simulation problems in closed systems. Applications include municipal water distribution systems, industrial process piping systems, fire protection sprinkler systems, cooling and heating water systems, and agricultural irrigation systems. FAAST uses an efficient, reliable, matrix solution technique that allows modeling of not only pipes and minor losses but also pumps, many types of valves, fire sprinklers, and more. User features include free-format input, easy data modification, any units, and any liquid properties.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

FIDAP (Fluid Dynamics Analysis Program)

Operating System: VMS
Keywords: • Automotive • Flow analysis • Mechanical engineering • Nuclear

This general-purpose program uses the finite element method to simulate many classes of incompressible fluid flows. Two-dimensional axisymmetric or 3-dimensional steady-state or transient simulations in complex geometries are possible. FIDAP's range of analyses includes isothermal Newtonian and non-Newtonian flows; free, forced, or mixed convection problems; advection-diffusion problems (velocity field fixed in space and time); environmental flows; creeping flows, such as molten glass or metals; and free-surface flows.

Available boundary conditions, which may be constant or time dependent, include specified velocities and/or temperatures; surface stresses; applied, convective, or radiative heat fluxes; surface tension; and normal and/or tangential boundary velocities. Constant or temperature-dependent models are available for fluid properties, such as viscosity, specific heat, conductivity, and volume expansion coefficient. A mixing-length eddy viscosity turbulence model can also be specified.

A companion graphics postprocessor program, FIPOST, allows the production of mesh; velocity vector; pressure, streamline, vorticity, and temperature contours; power spectrum; time history; and nodal quantity versus coordinate plots for 2-D or 3-D simulations. FIPOST also permits the calculation of derived quantities such as boundary stresses and heat fluxes.

A companion preprocessor mesh generation program, FIMESH, permits the automatic generation of the nodal coordinates and the element connectivities (for both 2-D and 3-D problems) for input to FIDAP.

Price: $30,000 – $60,000
Contact: Michael Engelman
(312) 491–0200
FLUID DYNAMICS INTERNATIONAL, INC.
624 Davis Street, Suite 202
Evanston, IL 60201

FLASH (Finite Element Analysis of Shells)

Operating System: VMS
Keywords: • Civil engineering • Mechanical engineering • Structural engineering

FLASH is a general-purpose program for the analysis of beam structures, membranes, folded plates, plates, and shells. The program, used to solve numerous construction and machine-building problems, is well suited for linear static analysis, stability analyses, problems with second-order effects, structures on elastic foundations, construction-phases analyses, and eigenvalue problems. With modern hybrid elements, high numerical efficiency, a simple and user-friendly input language, as well as extensive postprocessing of the results, FLASH is a powerful and cost-effective engineering tool. The program interfaces with the geometric data base of the CAD–B System and can be fully integrated in a computer-aided design environment.

Price: $15,000
Contact: Dr. D. Pfaffinger
(01) 252 65 75
DR. WALDER AND PARTNERS
Forchstrasse 21
Zürich 8032
Switzerland

Flownet

Operating System: VMS
Keywords: • CAD/CAM • Data base management • Flow analysis • Mechanical engineering

Memory required: virtual on VMS. Distribution medium: magnetic tape.

FLOWNET, written in FORTRAN IV and developed by R. T. Bradshaw, Inc., computes steady-state pressure and flow distribution in complete piping networks. FLOWNET is applicable to both compressible and incompressible flows. Features include flow balancing — calculation of flows, pressures, and head losses in all branches of a network; pipe sizing — assignment of pipe sizes to give minimum pipe cost; and pipe and pump sizing — assignment of pipe sizes and pump pressures to give minimum combined cost of pipes, pumps, and power. Input can be batch or interactive using DIS.

Price: Available upon request
Contact: I. W. Dingwell, President
(617) 492–1991
DIS/ADLPIPE, INC.
55 Wheeler Street
Cambridge, MA 02138

FLUENT (Fluid Flow Modeling System)

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Chemical • Petroleum • Process control • Simulation

FLUENT, a general-purpose computer program for modeling fluid flow, allows the engineer/designer without experience in computational fluid dynamics or computer programming to quickly analyze complex flow problems. The system incorporates the latest modeling techniques for simulating a wide range of fluid-flow problems. FLUENT enables the fluids engineer to apply state-of-the-art computer simulation methods to analyze and solve practical design problems.

FLUENT is ideally suited for modeling the complex internal flows in industrial process equipment. The program can handle diverse 2- or 3-dimensional steady-state flow situations, including single-phase gas or liquid flows, turbulent or laminar flows, isothermal or thermal mixing, fluids laden with dispersed phase of particles or liquid droplets (with or without evaporation and/or combustion), fluids with reacting chemical species, and combustion.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $15,000 – $40,000
Contact: Bart Patel
(603) 643–3800
CREARE R&D INC.
P.O. Box 71
Hanover, NH 03755

FPS (Fundamental Plotting Subroutines)

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers • Graphics

Zeta plotter software, Release 5.3, is intended for use with Zeta intelligent plotters and controllers. Available for most major mainframes, the subroutines are readily convertible to any standard FORTRAN. BASIC versions are also available.

This set of fundamental routines is designed to achieve full compatibility with the basic industry standards as well as to make full use of the features built into Zeta's intelligent controllers. The routines can be divided into two categories: industry-standard subroutines and Zeta's extended subroutines.

A version of this product is available for the PDP–11 computer.

Price: $250

Contact: Bill Manos, Product Manager
(415) 372–7568
NICOLET COMPUTER GRAPHICS DIVISION
777 Arnold Drive, P.O. Box 3020
Martinez, CA 94553

FRAME–ANALYSIS

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Calculation aids • Civil engineering • Structural engineering

This easy-to-use, user-friendly, structural analysis program for grillages and plane and space frames is a Genesys-based program with a consistent data entry style for engineers. The program offers easy geometry definition; automatic node numbering; loading of joints or members, including partial loads, temperature, settlement, and sway effects; and automatic self-weight calculation.

The facilities for design optimization enable an engineer to set, perhaps, deflection as a design criterion and to use the program to produce section size alternatives. Results include bending moments, shears, axial forces, displacements and reactions, and 2- and 3-dimensional graphics.

The fully integrated programs GRILLAGE, PRESTRESS, and FRAMEOUT are pre- and postprocessors that simplify the input and output for complex bridge geometry and loading conditions.

Price: $3000 – $15,000

Contact: Tony Craddock
(0509) 261519
LAMP SOFTWARE LTD.
Loughborough Technology Centre, Epinal Way
Loughborough, Leicestershire LE11 OQE
United Kingdom

Functional Subroutines

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers • Graphics • Presentation aids

The Functional Subroutines package for Zeta plotter software is a set of FORTRAN subroutines compatible with Zeta's Fundamental Plotting Subroutines. The Functional Subroutines provide the capability of plotting frequently used patterns, such as arrowheads, dimension lines, shaded polygons, and bars for business charts. Also included are routines for logarithmic scaling and axis notation.

A version of this product is available for the PDP–11 computer.

Price: $250
Contact: Bill Manos, Product Manager
(415) 372–7568
NICOLET COMPUTER GRAPHICS DIVISION
777 Arnold Drive, P.O. Box 3020
Martinez, CA 94553

GEARW

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Manufacturing • Mechanical engineering • Metals

Memory required: 64K minimum.

This program, written in MACRO, calculates gear wear according to A.G.M.A. specification and provides a tabulated summary. GEARW provides an accelerated design process and quick calculations from user data input. For both the pinion and the gear, the user specifies the diameter, face width, Brinnell hardness number, material type (1 for steel, 2 for cast iron), pinion r/min, and stage number. The GEARW program applies to any process involving design and/or analysis of gear performance.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

GENOPTICS (General Optical Systems Evaluation Program)

Operating System: VMS
Keywords: • Graphics • Optics • Research • Scientific

GENOPTICS aids in the analysis and evaluation of optical systems that use lenses, mirrors, diffraction gratings, and other geometrical surfaces. The GENOPTICS evaluation is performed by geometrical ray tracing based on Snell's law. The GENOPTICS program can provide for the exact ray tracing of up to 800 rays through as many as 40 surfaces, which may be planar, conic, toric, or polynomial-shaped lenses, mirrors, and diffraction gratings. Each surface may be tilted about three axes and may be decentered. Surfaces having bilateral symmetry may also be analyzed. GENOPTICS provides for user-oriented input and for a wide range of output for the evaluation of the optical system being analyzed.

GENOPTICS performs paraxial ray tracing and computation of the third-order aberrations, including aspheric contribution. Graphical output can be generated for spot diagrams, radial energy distributions, and modulation transfer functions, for each object point and each color. Sag tables may be generated for any rotationally symmetric surface, with options to obtain the sag differences from a reference sphere in units of lengths or wavelengths. Statistics and plots of ray intercepts with any surface in the system may be obtained for use in vignetting analysis and beam distribution analysis. A focal system can be examined with image statistics generated in terms of tangents of angles with respect to the optical axis. For exact ray tracing, a ray pattern at the entrance pupil can be specified as a rectangular or polar grid, where each ray samples an equal amount of area, or as a pattern, where each ray samples an equal amount of solid angle for a finite object. This latter pattern is useful in radiometric work.

Price: $765

Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

GIFTS (Graphics-Oriented Interactive Finite Element Time-Sharing System)

Operating System: VMS

Keywords: • CAD/CAM • Data base management • Graphics • Pre- and postprocessors

Distribution medium: magnetic tape.

This graphics-oriented collection of programs operates on a standard data base. Designed to fit in a relatively small core area, these programs are specifically suited to time-sharing and minicomputer systems. GIFTS may be used as a stand-alone finite element package or as a pre- and postprocessor for other systems. GIFTS' capabilities include model generation and display; generation and display of load and boundary conditions; displacement and stress display; static analysis;

substructuring; vibration-mode analysis; transient-response analysis; retrieval of numerical information; error detection; Lagrange multipliers; solid-model generation, display, and analysis; axisymmetric solids under arbitrary loading; program interfaces; thermal stress analysis; highly flexible input; and a double-precision option.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Susan Lewis or Dr. Kamel
(602) 621–6129
UNIVERSITY OF ARIZONA
AME Department, Building 16, Room 204
Tucson, AZ 85721

GINO (General Interactive Optimizer)

Operating System: VMS
Keywords: • Decision support • Mathematics • Scientific

This interactive program solves nonlinear optimization problems. The user may solve systems of nonlinear equalities and inequalities of up to 50 rows by 100 variables. Also included is a feature that enables the user to find the maximum profit or minimum cost solution to the problem.

Useful to the novice and expert alike, GINO combines the ease of use of LINDO with the power of Lasdon and Waren's GRG2 optimizer. On-line help is provided. Problems are quickly and easily entered from the terminal in standard mathematical notation or imported from text files created by a text editor. GINO has more than 20 commands for data input, editing, optimization, display, and file handling. Predefined statistical, financial, and scientific functions are included as well.

Price: $900 – $17,500
Contact: Kevin Cunningham
(312) 871–2524
LINDO SYSTEMS INC.
P.O. Box 148231
Chicago, IL 60614

GPSS (General-Purpose Simulation System)

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Materials handling • Scheduling • Simulation • Transportation

GPSS is a block diagram–oriented simulation language that facilitates development of simulation models of discrete systems, such as queuing systems or traffic flow systems. Used in industrial engineering, GPSS is preferred for the teaching of simulation. Application areas include manufacturing systems, computer communication networks, transportation networks, mining operations, and many others.

The products feature automated collection and display of statistics and interactive debugging facilities. User-written FORTRAN subroutines may be called from the model for special applications, including graphics displays or animated traces of system behavior.

Prices vary, depending on the computer system. Educational discounts are available. Full documentation is included. Several excellent textbooks describing GPSS and its applications are available from publishers, and several institutions offer short courses on the use of GPSS.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $750 – $6000

Contact: David Martin
(519) 679–3575
SIMULATION SOFTWARE LTD.
760 Headley Drive
London, Ontario N6H 3V8
Canada

GRAMP (Generalized Reliability and Maintainability Program)

Operating System: VMS

Keywords: • CAD/CAM • Decision support • Mathematics

Memory required: 500K. Distribution medium: magnetic tape.

This Markov-based model is used in the design and evaluation phases of complex fault-tolerant systems. GRAMP is a generalized program for a variety of demonstrated system applications, including aerospace and marine engine control, navigation and guidance, avionics, sonar systems and propulsion; automotive engine systems and warranty selection; nuclear and electrical power generation; telecommunication electronics; and fault-tolerant computers. GRAMP provides a low-cost solution to complex and expensive system analysis of reliability, maintainability, availability, and cost.

GRAMP can be easily attached to external data bases containing component failure, repair, or cost data. GRAMP evaluates the design of system architectures with respect to RMA specifications or goals, contractual warranty terms, and maintenance and support policy. GRAMP contains state-of-the-art advancements in modeling capabilities, including application to complex designs, efficient algorithms, sensitivity analysis, maintenance policy evaluation, and generality of simultaneous evaluation of reliability, maintainability, availability, cost, and weight.

GRAMP requires a FORTRAN–77 compiler, is easy to use, and comes with a comprehensive easy-to-read user's manual and complete training seminars.

Price: $15,000 – $25,000
Contact: Angela Cookson
(415) 494–2233
SYSTEMS CONTROL TECHNOLOGY, INC.
1801 Page Mill Road
Palo Alto, CA 94303

Grid

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Graphics • Mapping

Memory required: 64K minimum.

This program, written in MACRO, creates equally spaced lines parallel to the x- and/or y-axis from user-specified minimum and maximum values, and then the output file generated is rotated, if desired. The output file is then drawn on the plotter as a reference scale, as a background for charts, or as an overlay for an existing drawing to grid complex points for digitizing.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

GROUSE Ground Modeling System

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Architecture • Civil engineering • Mapping

GROUSE generates ground surfaces from random spot height survey data and displays surfaces as contoured plans, sections, and perspective views. Input includes digitized site boundary and spot height data. Users can interact with displayed results to modify surfaces, and the program calculates consequent cut-and-fill requirements.

GROUSE includes additional facilities to superimpose objects such as buildings or vegetation on a ground form and to obtain area values, density of objects within an area, linear distances, and slope conditions. GROUSE applications continue to be developed to meet particular user needs. The emphasis is on congenial user interaction.

The system, written in C, requires any computer that runs full UNIX* V7, SIII BSD 4.1, or commercially available versions such as XENIX or UNITY. Current smallest configurations include DIGITAL's LSI–11/23 microprocessor with 22-bit addressing, with at least 256Kb memory and 10Mb hard disk, plus back-up media. Available hardware includes more powerful Motorola 68000–based microcomputers, such as the Plessey System 68, at similar cost.

Peripherals include a raster graphics terminal, such as the Westward GT1015 or GT2015; a graphics plotter, such as the Hewlett-Packard 7221 (A3) or 7580/5 (A1/0); a digitizer, such as the TD HR–48 or Summagraphics ID–36; and a dot matrix or daisywheel printer. Equipment can be obtained independently of software; consulting services are offered on selection, purchase, and commissioning of equipment.

The data base management system supplied works efficiently on small computers, can be used for other computing applications, and allows adding applications functions. Included error trapping and recovery functions protect users from accidental loss of files.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: £10,000

Contact: Aart Bijl
44–(031) 667 1011 ext. 4598
EDCAAD, DEPARTMENT OF ARCHITECTURE
University of Edinburgh
20 Chambers Street
Edinburgh EH1 1JZ
United Kingdom

GTSTRUDL

Operating System: VMS

Keywords: • Architecture • CAD/CAM • Mechanical engineering • Structural engineering

GTSTRUDL assists an engineer in the structural analysis and design process and can be executed in batch or interactive mode or any combination of batch and interactive modes. This sophisticated state-of-the-art and fully integrated structural information processing system can supply accurate and complete technical data for structural design decision making. The system satisfies many important computational, data management, and decision-making needs of the structural analyst and the structural engineer.

GTSTRUDL integrates a wide variety of structural and finite element analysis, design, graphical display, and structural data base management features into a single system. Analysis includes both linear static and dynamic (response spectrum and transient) analysis of structures. More than 30 finite elements, including conventional, isoparametric, and hybrid formulation elements, are available.

Design in steel is performed by the AISC, API, ASME, and ASCE specifications for general steel structures and steel transmission towers. Design in reinforced concrete is performed in accordance with the latest ACI and British specifications for general framed and flat plate structures. Design, including seismic requirements, does member sizing and detailing for beams, columns, walls, flat plates, and joints.

Graphical display includes undeformed, deformed, and mode shape plots. Also included are 3-D rotation, windowing, panning, zooming, hidden- and boundary-line removal, shrink plots, split screen, extensive annotation and data base display, FE stress contours, member-force diagram and envelope plots, and dynamic analysis motion animation displays.

Comprehensive structural data base management facilities are available to the engineer. All communication with GTSTRUDL is performed by the engineer, using POL, an extremely convenient and powerful English-language, structural engineering, command-structured problem-oriented language.

Significant discounts are available for educational institutions; the price includes maintenance.

Price: $2200 – $23,000/yr
Contact: Dr. Leroy Z. Emkin
(404) 894–2260 or (404) 894–2229
GEORGIA INSTITUTE OF TECHNOLOGY
School of Civil Engineering
Atlanta, GA 30332

HEC 1: Runoff Hydrographs

Operating System: VMS
Keywords: • Civil engineering • Flow analysis
Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

HEC 1 performs a variety of runoff hydrograph computations, including manipulations of station and basin rainfall and snow data, calibration of rainfall/snowmelt/runoff models, and river-routing models. HEC 1 also computes stream system flood hydrographs and economic evaluations of basin modifications and structural effects. Input and output may be in either English or metric units.

A version of this product is available for the PDP–11 computer.

Price: $700
Contact: Gene Thayer, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

HEC 2: Backwater Profiles

Operating System: VMS
Keywords: • Civil engineering • Flow analysis
Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

HEC 2 computes the backwater surface profile for channels of any cross section for either subcritical or supercritical flow conditions. The effects of bridges, culverts, and weirs may be considered in the computations. Capabilities are available for assessing the effects of channel improvements, levees, and floodways on the water surface profiles. Input may be in either English or metric units.

A version of this product is available for the PDP–11 computer.

Price: $950

Contact: Gene Thayer, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

HERCULE

Operating System: VMS

Keywords: • Civil engineering • Structural engineering

This complete structural analysis and design system helps solve civil engineering problems. HERCULE consists of a set of computing and service programs communicating through a set of files. HERCULE can be used to integrally establish calculation notes, including concrete reinforcement.

The structures can be designed in 2- or 3-D form, with up to 2000 nodes. The user can design with beams or finite elements drawn from a specially adapted library. All types of boundary conditions, masses, and loads are provided for, including multipoint constraints, prestress, temperature, and more. Automatic generation of self-weight is a built-in feature.

The system can perform linear static calculation, large-displacement (*p*-effect) calculation, modal dynamic calculation under periodic or transient loading of a seismic type, and calculation of elastic stability. Printouts of checks and results are available independently of calculation sequences. Outputs are performed individually in the sequence and form requested by the user. Postprocessing sequences are available, such as envelopes, calculation of concrete reinforcement, square root superposition, and more.

A graphics module for displaying the model offers selection capabilities for cross sections and image handling. Display of the results includes deformed shapes, stress charts, isovalue curves, and graphs showing the variation of any quantity.

The documentation, in French, consists of a 4-volume user's guide, a pocket book, an interpretation guide, a test file, and glossary (analysis documents).

The FORTRAN source of the programs is distributed exclusively by SOCOTEC.

Price: $400/mo – $900/mo
Contact: Rémy Tenaud
(3) 043–99–13
SOCOTEC
3 Avenue du Centre
78182 Saint Quentin Yvelines
St. Quentin, YV
France

HIGHWAYS

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering • Graphics • Simulation

This flexible, user-friendly, integrated set of programs for the layout and design of major highways or freeways and road, rail, and airport layout schemes is a Genesys-based program. Terrain modeling is performed by the program module RANDOM, which accepts aerial or ground survey data in block, section, or random form from which contour drawings can be produced.

Horizontal and vertical alignments are designer defined in the main calculation module HIGHWAYS, using straight, curve, and transition elements. Ground long-section drawings can be produced for any horizontal alignment in the route band; as alignment changes are easy to effect, alternative routes can be compared.

Cut-and-fill calculations are automatically produced, including quantities, soiling, and seeding. Working drawings include contours, alignments, cross sections, long sections, and fully annotated plans. For the measurement of drainage pipes, data can be input by digitizer and schedules produced on B1 size drawings together with long sections.

Price: $8250 – $22,000
Contact: Tony Craddock
(0509) 261519
LAMP SOFTWARE LTD.
Loughborough Technology Centre, Epinal Way
Loughborough, Leicestershire LE11 OQE
United Kingdom

HILO–2™ Universal Logic Design Simulator

Operating System: VMS
Keywords: • CAD/CAM • Electronic • Simulation

The HILO–2 high-speed universal logic design simulator and test generation system, written in C and developed by Cirrus Computers, can be used in logic design and test applications for semicustom and full-custom integrated circuits, modules, printed circuit boards, and complete systems. The system has the necessary tools for effective design and test verification, allowing for thorough debugging of logic behavior before the designs are manufactured.

Circuits may be described at a gate (structural) level or at a higher functional level, arbitrarily mixing between those two levels. The HILO–2 hierarchical modeling language has unlimited nesting of submodules. In printed circuit board applications, HILO–2 has a comprehensive library of commercial devices.

The HILO–2 wave form description language is a time-based block-structured language that allows for flexible stimulus and response description. A full range of number bases may be used.

The HILO–2 simulator supports design analysis, with both typical and minimum/maximum delay specification. Efficient fault simulation is provided at both the structural and register transfer modeling levels, with accurate fault modeling capability. For circuits described at a structural level, HILO–2 includes an automatic test pattern generator based on the critical path technique.

In Europe, contact ETP Sales Manager (Phone: 011–44–628–39181 or Telex: 851–848321), GenRad, Ltd., Norreys Drive, Maidenhead, Berkshire SL6 4BP, England.

Price: Available upon request

Contact: ETP Sales Manager
(408) 727–4400 or Telex: 34–6496
GENRAD, INC.
Engineering Test Products
2855 Bowers Avenue
Santa Clara, CA 95051

HIPOST Tester Postprocessor

Operating System: VMS

Keywords: • CAD/CAM • Data conversion • Electronic • Pre- and postprocessors

This program converts simulation data output from GenRad's HILO–2 Universal Logic Design Simulator to the functional test vector format required by most testers. Eliminating the tedious and error-prone manual transcription of large test vector data sets, the HIPOST postprocessor provides an easy feed-forward mechanism to transfer design information to the critical manufacturing test phase.

The HIPOST postprocessor supports the test pattern processor (TPP) format required by the GenRad GR16 and GR18 VLSI testers and the sequence processor module format for the Sentry-series VLSI testers from Factron.

In Europe, contact ETP Sales Manager (Phone: 011–44–628–39181 or Telex: 851–848321), GenRad, Ltd., Norreys Drive, Maidenhead, Berkshire SL6 4BP, England.

Price: Available upon request
Contact: ETP Sales Manager
(408) 727–4400 or Telex: 34–6496
GENRAD, INC.
Engineering Test Products
2855 Bowers Avenue
Santa Clara, CA 95051

HITAP Testability Analysis Program

Operating System: VMS
Keywords: • CAD/CAM • Electronic

This program provides the design engineer with a quantitative measure of the testability of a digital logic design. Suited to gate array and standard cell designs and compatible with the HILO–2 Universal Logic Design Simulator, the HITAP testability analysis provides a figure of merit on selected nodes in the circuit. That figure of merit is measured in terms of observability (the ability to observe the node at a primary output) and controllability (the ability to control the node from a primary input). In addition, a testability parameter is calculated as the product of the observability and controllability factors.

HITAP features built-in primitive devices, simple data entry, automatic test point insertion, a menu-driver interface, graphical and tabular outputs organized by node or by device, and applicability to both combinatorial and sequential circuitry.

In Europe, contact ETP Sales Manager (Phone: 011–44–628–39181 or Telex: 851–848321), GenRad, Ltd., Norreys Drive, Maidenhead, Berkshire SL6 4BP, England.

Price: Available upon request
Contact: ETP Sales Manager
(408) 727–4400 or Telex: 34–6496
GENRAD, INC.
Engineering Test Products
2855 Bowers Avenue
Santa Clara, CA 95051

Holes

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Graphics • Manufacturing
• Mechanical engineering

Memory required: 64K minimum.

This program, written in MACRO, creates bolt hole patterns from user-defined input specifications. Prompts are for bolt pattern radius, bolt hole radius, starting angle (where the first hole is to appear relative to the x-axis), tapped or counterbored holes, and if counterbored: radius, counterbore line type (hidden lines may be selected for counterbore).

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000

Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

HONDO III

Operating System: VMS

Keywords: • Aeronautics/aerospace • Mechanical engineering • Nuclear • Structural engineering

Distribution medium: 9-track 1600 bpi magnetic tape.

This program, designed to calculate the large deformation, elastic and inelastic, transient dynamic response of 2-D solids, accommodates a wide variety of applications and finite strain calculations. Spatially, the program uses a 4-node isoparametric quadrilateral element. In time, the program performs the integration by using a central-difference method integrator.

The program contains four material subroutines covering elastic, viscoelastic, elastic-plastic, crushable foam, and soil behavior. A global energy balance is kept that is supplied by external forces, kinetic energy, and internal energy. Internal energy is stored in each element. Initial conditions on velocity but not displacement are allowed. Pressure loadings are allowed. Nonreflecting boundaries allow arbitrarily large domains to be modeled with meshes of finite extent. Thermal loads are not implemented. Sliding interfaces are implemented that let multiple and independently meshed regions interact. The interfaces provide for intermittent contact as well as arbitrarily large tangential motion between regions during contact.

The program functions entirely in core and because no stiffness matrixes are calculated and stored, large problems are easily accommodated. Suitable applications for HONDO include nuclear waste shipping cask impact studies, explosive and high-rate metal forming, projectile penetration, structures subjected to internal or external blast loads, and buried-structure survivability studies. The program is written in FORTRAN–77 and consists of 5448 lines of code, including comments. With minor exceptions, all of the dimensional variables are

stored sequentially in one array without gaps. The pointers are developed internally with each problem analyzed. The number of 4-byte words required is approximately 40 or 80 times the number of elements used, depending on the degree of quadrature requested.

Price: $17,000 – $25,000
Contact: Samuel W. Key
(505) 293–2000
RE/SPEC INC.
P.O. Box 14984
Albuquerque, NM 87191

Hoop

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Calculation aids • Manufacturing • Mechanical engineering

Memory required: 64K minimum.

This program, written in MACRO, calculates hoop stress for long pressure vessels or pipe, using the standard hoop stress formula given in the American Society of Mechanical Engineers Pressure Vessel Code. The three variables are thickness of the material, allowable tensile stress, and internal pressure. When any two of the three variables are supplied, the third variable is then calculated.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

I–G SPICE

Operating System: VMS
Keywords: • CAD/CAM • Electrical • Electronic • Graphics

This version of SPICE 2 gives the engineer the flexibility, on-line speed, and convenience of an interactive graphics package. The built-in editor enables the user to change the circuit or solid-state model parameters of a given circuit and to quickly see the new output curve on the graphics display. Any portion of an output plot may be enlarged to any degree. Also, any variable may be plotted versus any other variable. Scaling is uniform and automatic.

Version II of this program allows multiple plots on the same axes and engineering notation on all I/O. Output-defined parameters allow for the plotting of any equation or combination of variables versus any variable or combination of variables.

In Version III, automatic reruns allow for any and all circuit and model parameters to be changed as desired. The user may change the run-control specifications and turn any DC, AC, or transient analysis on or off. Version III provides a medium for setting up the input and output lists and specifying the saved output variable values. A powerful Monte Carlo capability permits complete statistical analysis of DC, AC, and transient responses. Sensitivity, worst-case, and optimization routines have also been incorporated, enabling the engineer to design and ensure realistic design centers for the mass production of discrete circuits and IC chips.

The Version III FORTRAN subprogram eliminates the severe modeling limitations of batch SPICE. Now, new models can be readily added. The designer is not constrained by the equivalent circuits of the various SPICE built-in model configurations. The FORTRAN subprogram automatically updates at every integration step to ensure accuracy without any loss in speed. AB Associates has started a stored library of commonly needed subprograms, including a sophisticated hysteresis program for complex magnetic applications (never before possible), unijunction, gallium arsenide, and tunnel diode models. All digital functions are included. Any SPICE component or element can be a tabular or equational function of any variable or variables. No more restrictions exist on any source component.

The I–G SPICE program includes a solid-state model library containing proven SPICE-compatible computer models for 200 devices covering the entire range of speeds and power levels. Included are bipolars, JFETS, MOSFETS, PWRFETS, diodes, zeners, SCRs, and new macro models for FET and bipolar input IC OPAMPS.

Documentation includes the *SPICE 2 User's Manual*, a 230-page applications handbook, and an I–G SPICE user's guide. The documentation is supplemented by a 12-hour, color video cassette training seminar.

I–G SPICE is compatible with the Tektronix 4xxx series, Hewlett-Packard 2648A, IBM 3277, DIGITAL VT1xx series, and other graphics terminals.

Price: $29,500
Contact: Dr. James C. Bowers
(813) 932–9853
AB ASSOCIATES
P.O. Box 82215
Tampa, FL 33682

I/CAP (Interactive Electronic Circuit Analysis Program)

Operating System: VMS
Keywords: • CAD/CAM • Electronic • Simulation • Text management

Distribution medium: magnetic tape.

This revised and augmented interactive version of the IBM ECAP/360 program enables data to be input by using the full ECAP formats, as specified in the ECAP manuals. In addition to ECAP/360 features, I/CAP provides full 50-node, 200-branch capability; a conversational, easy-to-use interactive free-format input language; a built-in text editor; selected output control; graphics output; and stored subcircuit models.

Note: This program requires floating-point hardware and FORTRAN–77.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Carol Kunz, Director of Marketing
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth, S.E.
Albuquerque, NM 87106

ICLAYOUT

Operating System: VMS
Keywords: • CAD/CAM • Electrical • Graphics • Manufacturing

ICLAYOUT is a CAD/CAM software package for designing and manufacturing masks for integrated circuits, hybrid circuits, discrete devices, and so on. The package features extensive on-line design and editing capability. The user may define the fill density and named cells and their subsequent manipulation as single entities. The user may also zoom or pan to any magnification. Plus, multiple step and repeat, rotation, and mirror reflection serve any angle, including fraction of a degree. A powerful cut command removes features within specified boundaries. The system will display on command digitizing grid points, center coordinates, resolution, and scale. The system performs an on-line CAM rule check and a true display of the final artwork. Technology-related commands include resistor, ohm/square, capacitance, film volume, and more.

Other features include parametric cells; built-in circle, arc, and alphanumerics; BASIC-like commands that allow the user to define his/her own design rule; and user-definable points equal to 10^{14}. The system automatically creates file documents. Session dialog is preserved in instruction files. Graphic information is saved in drawing files.

The system updates pick a menu so that only related commands and keywords will be shown. Further, the system checks for violation of user-definable minimum feature size.

The package supports a hard-copy unit to dump graphic/text information from screen, a data tablet, a modem, color graphics/text display, a drum plotter, a digitizer, a color printer/plotter, a camera, a half-inch magnetic tape drive, and a paper tape puncher.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $30,000

Contact: Nancy Wang, Assistant Manager
(617) 891–9829
COMPUTER GRAPHICS
22 College Farm Road
Waltham, MA 02154

IDSP (Interactive Digital Signal Processor)

Operating System: VMS

Keywords: • Scientific • Signal processing • Text management

IDSP consists of a set of time series analysis "operators" based on the algorithms commonly used for digital signal analysis work. The processing of digital time series to extract information is achieved by applying fairly standard operations. The various operations and combinations of operations may be used to explore their effect on the results. IDSP provides an interactive and easy-to-use system for that type of digital time series analysis. The IDSP operators can be applied in any order, even recursively, and can be applied to single time series or to simultaneous time series. IDSP is being used to process data obtained from scientific instruments on spacecraft. IDSP is also an excellent teaching tool for demonstrating the application of time series operators to artificially generated signals.

IDSP includes 28 standard operators. Processing operators provide for Fourier transform operations, design and application of digital filters, and eigenvalue analysis. Additional support operators provide for data editing, display information, graphical output, and batch operation. User-developed operators can be easily interfaced with the system to permit expansion and experimentation. Each operator application generates one or more output files from an input file. The processing of a file can involve many operators in a nontrivial application. IDSP maintains history information as an integral part of each file so that the user can display the operator history of the file at any time during an interactive analysis.

Price: $1200

Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

I/LOGIC (Interactive Logic Simulation)

Operating System: VMS

Keywords: • CAD/CAM • Diagnostics • Simulation

Distribution medium: magnetic tape.

This interactive program for simulation of digital logic circuits allows the engineer to check out logic designs prior to breadboarding. The user can input data for each logic block, run the simulation, make modifications, and store the problem on data files. The problem can then be retrieved from disk files, edited, and rerun as desired. Timing diagrams are printed at the terminal, thus allowing the user to check designs quickly. The program can handle certain logic blocks: RS, JK, T, D, 1-shot, and flip-flop; AND, NAND, OR, NOT, and XOR gates; buffers and inverters, with or without delays; and programmable switches and clocks.

All gates allow up to eight inputs, and all signal complements can be obtained by using the negative of the signal desired. A macro command is available for definition and repeated use of special functions in a simulation. Initialization of all blocks, variable waveform inputs, and race condition checks are also provided.

Note: Requirements to run this program are floating-point hardware and FORTRAN–77.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Carol Kunz, Director of Marketing
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth, S.E.
Albuquerque, NM 87106

ILS (Interactive Laboratory System)™

Operating System: VMS
Keywords: • Medical • Scientific • Signal processing

This comprehensive set of FORTRAN programs investigates signals and their properties. Those signals may be EKG traces, heart sounds, sonar signals, speech sounds, seismic pressure waves, radar reflections, and so on.

The software handles both real and complex data and supports addition, multiplication, magnitude, hard and soft limiting, phase wrapping and unwrapping, FFT and inverse FFT, autocorrelation, cross-correlation, convolution, spectral density, coherence, and moving or exponential averaging to reduce the variance of the estimates. The ILS programs allow data scanning and manipulation, spectral analysis, and pattern analysis/recognition. The software operates in an interactive or batch mode and includes such graphical operations as scaled data displays, multiple calibrated data displays with user-defined grid options, scatter plots with principal component-analysis options, and 3-D displays of spectra and spectral models.

ILS contains a standard set of file structures, including sampled data, analysis, record, and label files, which in combination can store and access numerous data types. The file conventions permit the efficient transfer of information from one program to the next and enhance the transportability of data and programs among installations.

DIGITAL distributes this software product under license from Signal Technology, Inc., 5951 Encina Rd., Goleta, CA 93117.

Refer to SPD #A0.19.xx when requesting further information on this product from your local DIGITAL sales office.

ILS (Interactive Laboratory System)™ is a trademark of Signal Technology, Inc.

A version of this product is available for the PDP–11 computer.

Price: $13,000 – $20,000

Contact: Consult your local DIGITAL sales office (see Introduction).

IMSL Library

Operating System: UNIX* (Berkeley), VMS

Keywords: • Application development • Mathematics • Programming tools • Statistics

The IMSL Library contains more than 500 mathematical and statistical FORTRAN subroutines. Serving as building blocks, the subroutines save costly programming time during development of FORTRAN application programs. The Library offers a wide variety of accurate, thoroughly tested subroutines that provide computational accuracy. The Library subroutines are arranged in 17 chapters on differential equations, quadrature, and differentiation; eigensystem analysis; interpolation, approximation, and smoothing; linear algebraic equations; vector matrix arithmetic; nonlinear equations; optimization; linear programming; basic statistics; regression analysis; analysis of variance; nonparametric statistics; observation structure; multivariate statistics; categorized data analysis; generation and testing of random numbers; and utility functions.

Substantial price discounts are available for universities.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $3000

Contact: Sales Division
(713) 772–1927
IMSL, INC.
7500 Bellaire Boulevard, NBC Building
Houston, TX 77036–5085

INSCAL

Operating System: VMS
Keywords: • Instrumentation • Inventory • Quality control
Distribution media: magnetic tape, RL02.

This FORTRAN program tracks and reports calibration dates for instruments and equipment in the data base. Instruments are categorized by such key characteristics as manufacturer, model number, serial number, date of purchase, and date of last calibration. The reports and listings allow users to schedule and use their calibration facilities efficiently.

Human interfacing is achieved through a built-in, menu-driven format and simple English dialog. File maintenance is provided to allow easy updating and editing of the data base.

A version of this product is available for the PDP–11 computer.

Price: $15,000
Contact: Robert Loesch
(203) 238–2351 ext. 352
CANBERRA INDUSTRIES, INC.
One State Street
Meriden, CT 06450

jass™

Operating System: MicroVMS, ULTRIX–32, VMS
Keywords: • Process control • Production control
• Quality control • Statistics

This modular system provides statistical tools for increasing the quality and productivity of products, services, and processes. The program encourages a progressive learning process whereby the novice can begin with more elementary analyses and then move into more sophisticated analyses.

The first jass module makes it easy to analyze experimental designs known as "2-level factorials." Those designs are useful in the research and development laboratory, the production line, and the marketing department. The software encourages the use of 2-level factorials to improve experimental efficiency.

General features include emphasis on graphical displays of results, input and output that is tailored for 2-level factorial designs, documentation, and a software design that fosters good statistical practice. The output features squareplots and cubeplots; tables and plots of effects; alias tables; normal plots and dotplots of effects, residuals, and data; interaction plots, scatter plots, and ANOVA tables; and tables of fitted values, residuals, and cell statistics.

The software determines a table of factor aliases for a design through any order of interaction. Blocking factors are allowed in the design specification. Unbalanced 2-level factorials can be analyzed, as well as designs with fuzzy-factor levels. Sophisticated data transformation and data editing capabilities are included.

The documentation includes a reference manual, a quick-reference card, an on-line help facility, and an introductory "test drive" for new users. Introductory short courses on the use of design of experiments with jass are available.

Price: $2300 – $6700
Contact: Lynda M. Finn
(608) 238–8134
JOINER ASSOCIATES INC.
732 North Midvale Boulevard, P.O. Box 5445
Madison, WI 53705

Lambert Geodetic Conversion

Operating System: VMS
Keywords: • Civil engineering • Data conversion • Geoscience
Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

This program converts geodetic longitude and latitude values to state plane coordinates and vice versa. Input is interactive or from COGO files. Source language is BASIC or FORTRAN.

A version of this product is available for the PDP–11 computer.

Price: $350
Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

LINDO (Linear Interactive and Discrete Optimizer)

Operating System: ULTRIX–32, VMS
Keywords: • Decision support • Mathematics
• Production control • Scientific

This interactive program for linear, integer, and quadratic programming problems serves the areas of distribution, product mix, production planning, and resource allocation and accommodates both the novice and the expert user. Free-form equation-type input is available for small problems. MPS and FORTRAN interfaces are practical for entering larger problems. The user can also import text files created by a text editor. LINDO exploits the sparsity of large problems and minimizes roundoff error through the Revised Simplex Method with Product Form Inverse. The user can also import text files created by a text editor.

LINDO has more than 50 commands for data input, editing, optimization, display, logical data inquiry, file handling, and sensitivity analysis. An accompanying application textbook and a user's manual are available. LINDO also provides on-line help. LINDO is installed at more than 400 sites in more than 25 countries.

Price: $500 – $5000
Contact: Kevin Cunningham
(312) 871–2524
LINDO SYSTEMS INC.
P.O. Box 148231
Chicago, IL 60614

LUSAS (London University Stress Analysis System)

Operating System: MicroVMS, VMS
Keywords: • Architecture • Civil engineering • Mechanical engineering • Structural engineering

Memory required: 2 megabytes. Distribution medium: magnetic tape.

This general-purpose finite-element program, written in FORTRAN–77, features ease of use; linear, nonlinear, and dynamic finite-element analysis; and state-of-the-art element and solution procedures libraries.

Price: Available upon request
Contact: Dr. Paul Lyons
(01) 353–2441
FINITE ELEMENT ANALYSIS LTD.
25 Holborn Viaduct
London EC1A 2BP
England

MACSYMA

Operating System: UNIX* (Berkeley), VMS
Keywords: • Graphics • Mathematics • Scientific • Statistics

Memory required: 2MB local memory, 14MB disk space.

This system, written in LISP, includes computer algebra, a text formatter, and graphics. Commands for algebraic simplification include factoring, matrix, vector and tensor manipulations, power series expansions, differentiation, pattern matching, integral transforms, and trigonometric simplification.

Symbolic integration uses the Risch Algorithm, analytic solution of differential and difference equations, solution of linear and nonlinear systems of equations, FORTRAN conversion and optimization, and simplification and evaluation of special functions. MACSYMA includes an automatic facility for converting mathematical expressions to TROFF form.

MACSYMA is fully user extensible. Functions and macros can be defined by the user. The simplifier can also be customized by the user.

Plotting of mathematical functions in two dimensions includes parametric and contour plotting. Single points can be plotted with any of 10 symbols and 20 line types that can be defined by the user. Logarithmic scales are also available. Arbitrary perspective views are available in three dimensions, with user-controlled resolution, viewpoint, and scale. Plots can be superposed, or several plots can be displayed in quadrants of one screen.

Full on-line help facilities, including documentation and tutorials, and a support service contract are available.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $15,000

Contact: Russell Gardner
(617) 576–2600
SYMBOLICS, INC.
Four Cambridge Center
Cambridge, MA 02142

Management Information System for Professional Service Firms

Operating System: VMS

Keywords: • Architecture • Financial management • Project management

Distribution media: 9-track 1600 bpi magnetic tape, RL02.

This project control system is designed for engineering consulting and architectural firms that need to monitor and control costs, revenue, and project performance on a real-time basis. The mode of operation is interactive — data is input to the system, inquiry can occur, and reports are produced as required. Reports and inquiries can be displayed on an organizational (departmental) and/or project management basis and can show complete detail, summary, or exception only.

Labor costs are computed from employee time inputs. The system also handles other direct costs. Information is maintained and displayed on a project, task, department, and/or activity basis. Comparison to budgets and calculation of earned revenue, variances, and actual multipliers are accomplished automatically, based on the contract type — cost plus, lump sum, fixed fee, percent of construction, cost plus fixed fee, or cost plus with upset limit. Prebilling reports and automated invoice routines for those contracts types are available from the integrated Billing Control System.

The package consists of the Project Control System, Billing Control System, Financial Control System, and Payroll System modules. The Project Control System interfaces with our interactive Financial Control and General Ledger systems to provide a complete integrated system for A & E firms of 50 to more than 1000 employees and with many locations, divisions, and departments. The financial system and payroll function offer all the standard accounting functions, such as all normal books of original entry, subsidiary control and reporting in payables and receivables, and full financial statement generation.

Price: $25,000 +
Contact: Chris Meyer, CDP
(813) 961–3902
BST CONSULTANTS, INC.
P.O. Box 23425
Tampa, FL 33623

MBP (Metal Building Program)

Operating System: VMS
Keywords: • Civil engineering • Graphics • Metals • Structural engineering

Distribution media: 9-track magnetic tape, RL02, RX01, RX50, TU58 DECtape II cartridge.

MBP's unique mode of operation optimizes the design of preengineered metal building systems. Initially, the program operates until the lightest frame that meets the AISC code is obtained. Then MBP displays a summary of the design results and presents a choice of options that allow the user to see pictures of the deflected shapes or to change the plate dimensions and reanalyze the frame, and so on. The automatic user-controlled mode of operation allows the user to tailor the frame.

The program features multiple-span multistory frames; tapered built-up members; concentrated, distributed, and temperature loads; forced displacements; elastic supports; self-weight calculations; plots of the undeflected geometry, deformed shapes, and internal stresses; a user-specified plate library; true free-format input; and extensive data checking and comprehensive error-condition reports.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $5000
Contact: Arturo Durand
(213) 398–3106
INTERNATIONAL STRUCTURAL ENGINEERS, INC.
P.O. Box 241740
Los Angeles, CA 90024

McAuto COGO (Coordinate Geometry)

Operating System: MicroVMS, VMS
Keywords: • Civil engineering • Mapping

This information processor for the computerized solution of geometric problems consists of processing routines, information files, and a unique user-oriented language for the natural expression of geometric objects. COGO's versatility and ease of use let you express individual problems as a combination of simple objects, such as points, lines, curves, courses, alignments, and profiles. The system maintains a data table for those objects. Input consists of engineering-oriented phrases mixed with project data, such as coordinates, profiles, and alignments. With COGO plotting, any previously defined geometric object can be displayed and/or plotted on a variety of plotters.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

McAuto ROADS (Roadway Analysis and Design System)

Operating System: MicroVMS, VMS
Keywords: • Civil engineering • Mapping

This system has been used in the location and design of freeways and city streets, as well as in the design of airports, earthen dams, levees, canals, and railroads. You can solve site grading problems, using the ROADS Final Quantities special routine. ROADS encompasses the COGO geometric problem-solving capabilities, which allow a project alignment to be easily computed, checked, and mathematically related to the terrain survey baseline alignment. The alignments are automatically stored for retrieval in the design phase. ROADS plotting includes COGO-defined geometric objects, cross sections (original terrain, as-designed or final surface cross sections), mass ordinate diagrams, ground profiles, perspective views, and surface contours. ROADS is written in ICICLE (FORTRAN-based language), COBOL, and MACRO.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

McAuto SELOS (Sea Environment Loading on Offshore Structures)

Operating System: MicroVMS, VMS
Keywords: • Civil engineering • Petroleum • Pre- and postprocessors • Structural engineering

Memory required: 1MB.

This program, written in FORTRAN, is used to perform wave, wind, current, weight, or cable load simulations on lattice frame–type structures. The program can be used as a preprocessor for a STRUDL stress analysis or can be used to perform motion simulations, such as jacket launch or upending. The program is also suitable for motion simulations of tethered platforms, such as semisubmersibles and tension leg structures. Another feature, termed "Dynamic Interaction Loading Capability," permits motion simulations of high fundamental period structures, such as jackets in water depths exceeding 400 feet and "guyed tower" configurations.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

McAuto SLOPE: Slope Stability Analysis System

Operating System: MicroVMS, VMS
Keywords: • Civil engineering

Memory required: 350KB.

This system performs automated analysis of slope and embankment stability problems, using the simplified Bishop, Fellenius, and Morgenstern-Price methods. SLOPE has automatic search techniques to find the critical failure surface, with or without the effects of earthquake and water. Being an ICES subsystem, SLOPE has such user features as free-format command-driven input, interactive processing, large capacity, ease of data modification, real-time graphics, and a metric units option.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

McAuto STRUDL (Structural Design Language)

Operating System: MicroVMS, VMS
Keywords: • Structural engineering

Memory required: 300KB.

This tool, written in FORTRAN, is used to solve static/dynamic structural analysis and design problems for 2- and 3-dimensional frame/truss/finite element structures. The structure's weight can be combined with joint, member, settlement, dynamic, and temperature loads and then factored to account for code allowables. Input or output can be retrieved, saved, and restored for additional processing. Forces, shears, moments, displacements, and stresses can be listed and/or displayed graphically. Static and dynamic results may be combined for sizing and checking of steel and reinforced concrete members. For concrete design, you can use ACI '63 or '77 specifications. For steel design, you may choose several building codes, including AISC, API, AIJS, ASME (NF–17), and British standards. McAuto STRUDL also has capabilities for solving offshore structures, electrical transmission towers, and nonlinear problems. Able to handle any size job, McAuto STRUDL easily solves a 1-member cantilever beam or a 10,000-member space truss.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

MCSIM (Monte Carlo Simulation)

Operating System: UNIX* (Berkeley, System III, System V), VMS
Keywords: • Biology • Mathematics • Research • Statistics

MCSIM is a FORTRAN program for evaluating parameter estimation accuracies and related sample statistics for a given model with given data error statistics, by computer simulation of multiple experiments. The user provides the model and data statistics in a FORTRAN subroutine and standardized format. Program output is highly readable and user friendly.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $500 – $1000
Contact: Dr. Joseph J. DiStefano III, Professor
(213) 825–7482 or 825–4033
UNIVERSITY OF CALIFORNIA, LOS ANGELES
School of Engineering and Applied Science
Biocybernetics Laboratory, 4731K Boelter Hall
Los Angeles, CA 90024

MOLDFLOW™

Operating System: VMS
Keywords: • Graphics • Manufacturing • Simulation

This interactive computer program is used to design plastic molds and parts manufactured by thermoplastic injection molding. The designer uses MOLDFLOW to simulate the molding of a plastic part by predicting how plastic will flow into a mold.

MOLDFLOW™ is a proprietary product of MOLDFLOW Australia Pty. Ltd., Borona Victoria, Australia.

Price: $50,000 or $2800/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

MOSFIT (MOS Transistor Model Parameter Extraction Package)

Operating System: VMS
Keywords: • CAD/CAM • Electronic • Research • Simulation

Distribution media: magnetic tape, RX02, TU58 DECtape II cartridge.

The software is used for modeling MOS transistor characteristics and is a companion to SIMIC MOS Integrated Circuit CAD program. The SPICE MOS 3 MODEL is also supported. The package contains three routines that measure transistor I–V data through the IEEE 488 bus, extract and optimize model parameter values, and display measured and simulated I–V curves for visual comparison.

Parameter optimization is carried out within user-set search boundaries. The menu-driven software is interactive to allow control over the parameter extraction process. The model provides an accurate representation of MOS device behavior, including short and narrow channel effects, drift velocity saturation, nonuniform impurity profiles, channel length modulation, and parasitic series resistance effects. The program is structured to allow other device model subroutines to be installed, if required.

A version of this product is available for the PDP–11 computer.

Price: $9750
Contact: Allan Silburt, Technical Specialist
(613) 836–3134
MOSAID INC.
P.O. Box 13579
Kanata, Ontario K2K 1X6
Canada

MOSS Modeling System for Civil Engineering Survey and Mining

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering • Graphics • Mining

This system is for surface modeling in civil and mining engineering, land survey, and cartography problems requiring information on existing land forms and for the development of new designs. MOSS is used in mining for the modeling of workings, continuous surveys for production payment, and landscaping of spent workings.

The system provides for the creation of 3-dimensional models from air, ground, and hydrographic surveys by photogrammetry and for direct data capture from the most modern survey total stations instruments with automatic data collectors. Comprehensive design facilities allow for the complete detailed design of major civil works, including highways with complex grade separated and at-grade interchanges, railways, airport runways and taxiways, dams, river diversions, and other situations in which the interaction between two surfaces is involved.

Options provide for the computation of areas and volumes and the contouring and development of comprehensive data for site setting. The extensive graphics facilities provide for the automated production of plan and section drawings to contract standards, with complete user control over annotation, drawing content, and layout.

Three-dimensional perspective drawing with optional hidden-line removal allows you to visualize projects at each stage of development. Facilities for photomontage provide for the superposition of project perspectives on any background photograph.

The powerful MOSS facilities are accessed through a simple command language. The system can be configured to drive most graphics terminals through CORE or GKS or IGL software.

Drawings from MOSS can be passed to computer drafting systems for the addition of further layers of data, such as drainage layouts, concrete shuttering details, road markings, and signing details and public utility services.

Price: $15,000 – $45,000
Contact: J. M. Houlton
44 403 59511
MOSS SYSTEMS LTD.
Barclays House, 51 Bishopric
Horsham, West Sussex RH12 1QJ
United Kingdom

MOVIE.BYU

Operating System: ULTRIX–32, VMS
Keywords: • Civil engineering • Graphics
• Pre- and postprocessors • Simulation

The MOVIE system consists of FORTRAN programs that facilitate the display and manipulation of data representing mathematical, topological, or architectural models whose geometry can be described in terms of polygonal elements or contour-line definitions. The source of the polygonal element data is often a finite element or finite difference analysis.

The programs work together to provide perspective displays in line drawing and/or continuous tone-image format; clip and cap 3-dimensional finite element systems to expose internal surfaces; modify geometry, displacement, and/or scalar function files by way of correction, differencing, appendage, or symmetry operation; generate new models or title representations; and convert complex contour-line definitions into polygonal element representations of the surface.

MOVIE.BYU provides shadows, multiple light sources, transparency, dithering, antialiasing, fog simulation, solid modeling for bodies of revolution, surfaces of functions of three variables, curved clipping of solids, capability to create and access command files, and interfaces to a number of continuous tone-color display devices.

Price: $500 – $2000
Contact: Dr. Bruce J. Nay
(801) 378–2903
BRIGHAM YOUNG UNIVERSITY, CIVIL ENGINEERING DEPARTMENT
368 CB
Provo, UT 84602

MS1 (McAuto System 1)™

Operating System: VMS
Keywords: • Communications • File management
• Project management

Memory required: 2MB. Distribution medium: magnetic tape.

This turnkey or software-only system interfaces with many of McAuto's architectural, engineering, and project management applications programs. McAuto System 1 tracks computer resources used on a project basis and controls user access to projects and applications programs. The system provides RJE/RBF communications to McAuto's mainframe and automatic control-language generation for application programs. McAuto System 1 is written in FORTRAN and Pascal.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

MSC/NASTRAN

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM • Civil engineering • Structural engineering

MSC/NASTRAN is a general-purpose finite element analysis program proprietary to MacNeal-Schwendler Corporation. Program capabilities include linear and nonlinear static and dynamic structural analysis, including aeroelasticity, heat transfer, acoustics, electromagnetism, and other types of field problems. Engineers in large and small companies worldwide use MSC/NASTRAN in industries such as aerospace, automotive, energy, civil engineering, chemical engineering, shipbuilding, optics, and government research.

MSC/NASTRAN solves complex engineering problems accurately and efficiently. The system architecture was designed to allow for this capability and includes features such as sparse matrix routines, multilevel superelements, cyclic symmetry, generalized dynamic reduction, and component-mode synthesis. Additionally, special features include automatic card-driven restart, automatic singularity suppression, automatic resequencing, and data checking with error analysis. MSC/GRASP, a pre- and postprocessor for model generation and graphic display of finite element models, complements the MSC/NASTRAN program.

Price: $900/mo – $1800/mo
Contact: Perry L. Grant
(213) 258–9111
MACNEAL–SCHWENDLER CORP.
815 Colorado Boulevard
Los Angeles, CA 90041

MTS–50

Operating System: VMS
Keywords: • Process control • Production control • Quality control • Shop floor control

MTS–50 is a process and product engineering evaluation and control system for industries that manufacture semiconductors, printed circuit boards, and complete integrated electronic products. The system assists engineering in process control, equipment control, and yield improvement.

This relational data base system includes:

- Work-in-process material tracking and the display of process specifications or operator instructions, as well as the ability to enter comments at each data entry station.
- Several levels of data — in wafer, wafer to wafer, lot to lot or components, boards, subassemblies, and so on, with roll up to higher levels — are handled.
- The definition of all data, units, scale multiplier, valid limits, and specification limits. The system can also perform calculations on data and treat the calculated values as original data.
- Comparisons of all data for validity, specification, and internally generated X–R statistics for normalcy. Reporting on any out-of-control or out-of-specification situations, with material disposition feedback, is provided.
- Maintenance of running statistics for update of standards for cycle times, scrap and rework rates, yields, and data.
- Easy selection and reporting of data. Powerful statistical analysis capabilities include regression and correlation.

Custom versions of the system are easy to define and install, and modification and expansion are simple.

A version of this product is available for the PDP–11 computer.

Price: $35,000 – $75,000
Contact: Brian Taylor
(617) 263–3408
MICROPRODUCT TECHNOLOGY SOFTWARE, INC.
945 Concord Street
Framingham, MA 01701

NASTRAN® (NASA Structural Analysis System)

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM • Mechanical engineering • Structural engineering

This general-purpose program for the analysis of structures by the displacement method of the finite-element approach gives the engineer a wide range of modeling and analysis capabilities. Development of NASTRAN was initiated in the mid-1960s by the National Aeronautics and Space Administration to provide its research centers with a powerful, general-purpose finite-element computer program for structural analysis, and NASA has actively maintained and improved NASTRAN.

The intended range of applications of NASTRAN includes almost every kind of structure and construction. Structural and modeling elements are provided for the specific representation of the more common types of structural building blocks, including rods, beams, shear panels, plates, and shells of revolution. More general types of building blocks can be treated as combinations of those simple elements or by use of the "general" element capability. The substructuring capability

allows different sections of a structure to be modeled jointly after having already been modeled separately. NASTRAN permits the effects of control systems, aerodynamic transfer functions, and other nonstructural features to be incorporated into the solution of the structural problem.

The range of analysis types that NASTRAN can automatically handle includes static response to concentrated loads, to distributed loads, to thermal expansion, and to enforced deformations; dynamic response to transient loads, to steady-state sinusoidal loads, and to random excitation; and the determination of real and complex eigenvalues for use in vibration analysis, dynamic stability analysis, and elastic stability analysis. NASTRAN also has a limited capability for the solution of nonlinear problems, including piecewise linear analysis of nonlinear static response and transient analysis of nonlinear dynamic response. Users may develop their own analysis capabilities by using the Direct Matrix Abstraction Programming (DMAP) language.

Price: $5600/yr

Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

NBOD2

Operating System: VMS

Keywords: • CAD/CAM • Mechanical engineering • Robotics • Simulation

Distribution medium: 9-track 1600 bpi magnetic tape.

Developed for the analysis of spacecraft attitude dynamics but also applicable to a large class of problems involving coupled N-body systems, NBOD2 automatically derives and numerically solves the equations of motion for any system that can be modeled as a topological tree of coupled rigid bodies, flexible bodies, point masses, and symmetrical momentum wheels. NBOD2 uses a topological tree model of the dynamic system to derive the vector-dyadic equations of motion for the system. The user builds this topological tree model by using rigid and flexible bodies, point masses, and symmetrical momentum wheels with appropriate connections. To ensure that the relative motion between contiguous bodies is kinematically constrained, NBOD2 assumes that contiguous rigid and flexible bodies are connected by physically reliable 0, 1, 2, and 3 degrees-of-freedom gimbals. Those gimbals prohibit relative translational motion while permitting up to 3 degrees of relative rotional freedom at hinge points. Point masses may have 0, 1, 2, or 3 degrees of relative translational freedom, and symmetric momentum wheels may have a single degree of rotational freedom relative to the body in which they are embedded. Flexible bodies may possess several

degrees of vibrational freedom in addition to those associated with the connection gimbals. Data on the natural modes and vibrations of the flexible bodies must be supplied by the user.

NBOD2 combines the best features of the discrete-body approach and the nested-body approach to reduce the topological tree to a complete set of nonlinear equations of motion in vector-dyadic form for the system being analyzed. NBOD2 can then numerically solve the equations of motion. Input to NBOD2 consists of a user-supplied description of the system to be modeled. The NBOD2 system includes an interactive tutorial input support program to aid the user in preparing input data. Output from NBOD2 consists of a listing of the complete set of nonlinear equations of motion in vector-dyadic form and any user-specified set of system state variables. The NBOD2 program is written in FORTRAN–77 for batch execution and has been implemented on a VAX–11/780 computer.

Price: $1575

Contact: Ruthann Jones
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30605

NCA/DVS (NCA Design Verification System)

Operating System: VMS

Keywords: • CAD/CAM • Electrical • Graphics

This system verifies electrical circuit design by performing the following tests:

- The Electrical Rules Check (ERC) verifies that a chip layout in a semiconductor technology correctly represents a valid circuit unit. Using a color graphics terminal, ERC detects errors and overlays the violation on the original layout. Violations include missing contacts and transistors, internal shorts, and more.
- The Network Consistency Check (NCC) compares a network design with a corresponding layout to verify consistency.
- The Electrical Parameters Check (EPC) checks parameters that affect load and speed. The calculated results can be input to a simulator to provide accurate models. The degree of detail and complexity of the EPC computations can be defined by the Technology Description Language. EPC checks transistor gate arrays, widths and lengths, W/L ratios, and more. EPC also allows the user to determine the selection, format, and content of the output.

- The Universal Design Rules Check (UDRC) provides a standard for analysis and discrimination of difficult patterns. At the same time, UDRC improves efficiency for gate array, standard cell, and other limited technologies. UDRC can apply functions to the IC nested graphics data base in a single execution, without losing the nested structure.
- The Mask Data Preparation (MDP) is used to prepare verified layout data for optical or e-beam pattern-generation equipment. MDP provides three standard functions for mask production: Sizing, for IC mask line-width compensation; Fracture, for breaking closed polygons into rectangles; and Compare, for inputting the optimized PG tape to NCA/DVS to verify that the final result is consistent with the original engineering design.

Price: $50 – $150
Contact: Walt Packard
(408) 986–1800
NCA CORP.
3250 Jay Street
Santa Clara, CA 95051

Network II.5

Operating System: UNIX* (Berkeley), VMS
Keywords: • Communications • Development tools • Networking • Simulation

Distribution medium: magnetic tape.

This design aid takes your specified system description and provides measures of hardware utilization and software execution and conflicts. The product's flexible approach can be used to model any computer system — large or small, centralized or distributed.

Network II.5 does not require programming. An interactive, user-friendly interface enables you to use the system after a short training period.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $18,500 – $25,000
Contact: Paul Gorman
(619) 457–9681
CACI, INC.
3344 N. Torrey Pines Court
La Jolla, CA 92037

NEXUS/NASCAD

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM • Graphics • Mechanical engineering

NEXUS, the NASA Engineering Extendible Unified Software system, is an integrated set of computer programs that support the full sequence of activities encountered in NASA engineering projects. That sequence spans preliminary design, design analysis, detailed design, manufacturing, assembly, testing, and servicing. NEXUS addresses the process of prototype engineering, which is the job of getting one or a few copies of a product to work. Prototype engineering is a critical element of large-scale industrial production.

NEXUS extendability and unification are achieved by organizing the system as an arbitrarily large set of programs that can be accessed in a common manner through a single user interface. The NEXUS interface is a multipurpose interactive graphics interface called NASCAD, for NASA Computer-Aided Design. With NASCAD, the user can construct and display 3-dimensional geometric models, activate sequences of programs, and transfer data among programs. NEXUS readily interfaces with external programs such as NASTRAN for finite element analysis and with APT for supporting the manufacturing process. Statistical analysis programs will analyze test data and correlate measurements with design analysis data. With NEXUS, NASA can effectively apply the continously evolving capabilities of computer-aided design techniques. In addition, NEXUS should also find a wide range of commercial applications.

Price: $2500/10-yr lease

Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

NUPIPE–II

Operating System: VMS

Keywords: • CAD/CAM • Civil engineering • Mechanical engineering • Nuclear

NUPIPE–II performs linear elastic analysis of 3-dimensional piping systems for static, thermal, seismic, and other dynamic loading conditions. It performs stress analysis in accordance with the requirements of the following codes: Section III of ASME Code for Nuclear Class 1, 2, or 3; ANSI B31.1–1967 and B31.1–1977 Power Piping; and ANSI B31.3–1976 Petroleum Refinery Piping.

The program uses the finite element direct-stiffness method of analysis. The piping system is idealized as an assemblage of linear elastic elements connected at discrete node points. Stiffness, mass, and damping matrixes are formulated. Appropriate load vectors are constructed for the specified loading conditions. State-of-the-art algorithms are provided for the solution of equations, for eigenvalue extraction, and for the modal and direct integration of the equations of motion.

NUPIPE–II has a restart capability; checks data extensively and provides error messages; offers input/output in English, metric, or SI units; calculates ASME and ANSI Code equations automatically; evaluates up to 75 load cases each run; maintains 3600 static degrees of freedom and 1800 dynamic degrees of freedom; selects dynamic nodes automatically; provides specialized routines for European industry; and has multiple independent-response spectra capability.

Price: $5000 – $70,000

Contact: John R. Nardello
(408) 866–4510
QUADREX CORP.
1700 Dell Avenue
Campbell, CA 95008

OPTAN (Optical Systems, Evaluation, and Analysis)

Operating System: VMS

Keywords: • CAD/CAM • Optics • Scientific

Distribution medium: magnetic tape.

This interactive optical analysis program is designed for ray-tracing complex multiple imagery, including nonrotationally symmetric aspheric systems. Two glass catalog data bases — Schott and Ohara — are provided for easy access and changes of glass parameters. Nonstandard parameters may also be entered. Systems of up to 48 surfaces may be analyzed, and up to fifth-order aberrations can be calculated for nominal, minimum, and maximum wavelengths. Output can be obtained for surface-by-surface ray data; paraxial marginal and principal ray heights and angles at the surfaces; upper and lower rim–ray heights at each surface for relative vignetted apertures, for three relative field positions; and any general skew ray for specified object and pupil coordinates.

This program requires floating-point hardware and FORTRAN–77.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Carol Kunz, Director of Marketing
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth, S.E.
Albuquerque, NM 87106

PADL–1 (Part and Assembly Description Language)

Operating System: VMS

Keywords: • CAD/CAM • Education • Graphics
• Mechanical engineering

PADL designates a family of languages and systems for describing mechanical parts and other solids as compositions (mainly additions and subtractions) of simple solid building blocks. The system is implemented in FLECS/FORTRAN and contains about 40K lines of source code and 40K lines of comments; FLECS-to-FORTRAN translators are provided.

PADL–1 is a turnkey solid modeler intended mainly for educational use in universities and in industry and for a limited range of CAD, graphics, and research applications. Solids are defined, using a keyboard-interactive language, as compositions of orthogonally positioned blocks and cylinders. The PADL–1 processor can automatically compute line drawings in a variety of styles — orthographic, isometric, perspective, sectioned, dimensioned, and so forth — color-shaded CRT renderings, spatial interferences, and mass properties — volume, centroid, and moments and products of inertia.

Price: $1100 – $2200

Contact: Gunta J. Liders
(716) 275–3106
PRODUCTION AUTOMATION PROJECT
University of Rochester
College of Engineering and Applied Science
Rochester, NY 14627

PADL–2 (Part and Assembly Description Language)

Operating System: MicroVMS, VMS

Keywords: • CAD/CAM • Graphics • Mechanical engineering

PADL designates a family of languages and systems for describing mechanical parts and other solids as compositions (mainly additions and subtractions) of simple solid building blocks. The system is implemented in FLECS/FORTRAN and contains about 40K lines of source code and 40K lines of comments; FLECS-to-FORTRAN translators are provided. PADL–2 was designed to execute in 32-bit virtual memory environments and requires considerable software sophistication to commission and to customize.

PADL–2, designed to be an extensible core for research modelers and industrial CAD/CAM systems, handles compositions of arbitrarily positioned blocks, cylinders, spheres, and cones. It has a powerful language-based input processor and a modular graphics-output processor, both of which can be replaced with user-customized modules. Certain core-system extensions and application modules, such as a Mass Properties Module, a Global Hidden-Edge Processor, and an enhanced graphics output package, are available as options.

Price: $600 – $20,000
Contact: Gunta J. Liders
(716) 275–3106
PRODUCTION AUTOMATION PROJECT
University of Rochester
College of Engineering and Applied Science
Rochester, NY 14627

PALETTE™

Operating System: MicroVMS, VMS
Keywords: • Architecture • CAD/CAM • Civil engineering • Mechanical engineering

Distribution media: disk, diskette, magnetic tape.

This computer-aided drafting and design (CADD) system, written in FORTRAN, increases the user's productivity, reduces cost, improves drafting quality and consistency, and enhances modification speed. PALETTE is used by architects; facilities managers; structural, civil, electrical, mechanical process, and production engineers; and educators. New users find PALETTE easy to use, speedy, and compatible with a wide range of computers. PALETTE allows new users to start with a minimal, low-cost system and to progress easily to larger, high-performance systems.

A version of this product is available for the PDP–11 computer.

Price: $9950 – $90,000
Contact: Peter Horsley
(617) 273–5660
PALETTE SYSTEMS INC.
2 Burlington Woods Park
Burlington, MA 01803

PAM (Package for Analog Modeling)

Operating System: VMS
Keywords: • Mathematics • Numerical analysis • Simulation

Memory required: 264K. Distribution medium: magnetic tape.

PAM is designed for continuous time simulation (analog modeling) problems, in which a physical system is modeled by a set of simultaneous differential equations. By obtaining the solution to the equations (by some means of numerical integration), the behavior of the physical system can be inferred.

PAM is a special-purpose language in which a given problem can be encoded to obtain a numeric solution. PAM is similar to UNIVAC's ACSL, ICL's SLAM, and IBM's CSMP.

PAM is intended for people who are not particularly well versed in methods of numerical analysis and who may have little programming skill but who are able to extract the governing differential equations that describe a process they wish to solve numerically. DECUS number VAX–57.

Price: $5 – $225
Contact: DECUS (see Introduction)

PANCLP (Postbuckling Analysis of Nonlinear Composite Laminated Plates)

Operating System: VMS
Keywords: • Aeronautics/aerospace • Civil engineering • Structural engineering

This program calculates buckling loads and postbuckling behavior of edge-stiffened flat or curved panels. The formulation includes transverse shear and thus is applicable to moderately thick (b/t>10) plates. Material inelasticity, in the form of Ramberg-Osgood stress-strain curves, is included for both the inplane behavior and the matrix material. The nonlinear mechanics approach is general from a material standpoint. Thus, metals, composites, and hybrids are easily handled. Postbuckling calculations include displacements, strains, and stresses. The stiffener model is unique and has been accurately correlated to experimental test data. In fact, all aspects of the program have been validated by comparison to test data. The program is based on numerical integration and keyed toward a fast, efficient design process for postbuckled panels. Predictions of stress/strain have been used to establish static strength and fatigue life. Predictions of stiffener torsional stress establish the load at which stiffener disbonding occurs.

Price: $30,000 – $200,000
Contact: Dr. Rocky R. Arnold
(415) 593–2125
ANAMET LABORATORIES, INC.
100 Industrial Way
San Carlos, CA 94070

PANDA (Panel Design Analysis)

Operating System: VMS
Keywords: • Aeronautics/aerospace • Civil engineering • Mechanical engineering • Structural engineering

Memory required: 1000 blocks.

PANDA, written in FORTRAN–77, is an interactive program through which minimum-weight designs of composite, elastic-plastic, stiffened, cylindrical panels, and cylindrical shells can be obtained subject to general and local buckling constraints, as well as stress and strain constraints. The panels are subjected to arbitrary combinations of inplane axial, circumferential, and shear loads. Nonlinear material

effects are included if the material is isotropic or has stiffness in only one direction, as does a discrete or smeared stiffener. The panel can be stiffened with both stringers and rings.

Several general and local buckling modes are provided as constraints in the optimization process, including general instability, panel instability with either stringers or rings smeared out, local skin buckling, local crippling of stiffener segments, and general, panel, and local skin buckling, including the effects of stiffener rolling. Certain stiffener rolling modes, in which the panel skin does not deform but the cross section of the stiffener does deform, are also accounted for.

The interactive PANDA system has three independently executed modules that share the same data base. In the first module, an initial design concept with rough (not necessarily feasible or accurate) dimensions is provided by the user in a conversational mode. In the second module, the user decides which of the design parameters of the concept are to be treated by PANDA as decision variables in the optimization phase. In the third module, the optimization calculations are carried out with the help of the CONMIN optimizer.

Price: $1000 – $2000

Contact: Dr. David Bushnell
(415) 858–4037
LOCKHEED PALO ALTO RESEARCH LABORATORY
3251 Hanover Street, Department 92–50, Building 255
Palo Alto, CA 94304

PATRAN®

Operating System: MicroVMS, VMS

Keywords: • Graphics • Mechanical engineering • Simulation

PATRAN, an interactive approach to engineering analysis modeling, is a powerful solid and surface modeler that allows rapid definition of an engineering model. Automated finite element modeling capabilities are combined with this geometric approach to produce an accurate, easily verified analysis model.

PATRAN can be used with built-in analysis capabilities, or you can interface directly to many leading analysis packages. Integral post-processing capabilities use the color graphics and imaging techniques of PATRAN to permit evaluation of your analysis productively. The system gives a clear picture of a 3-dimensional state of behavior on your system at a reasonable price and is available on most computers, graphic displays, and CAD/CAM systems.

Price: $8000/yr – $30,000/yr

Contact: Tony Glinskas
(714) 556–2800
PDA ENGINEERING
1560 Brookhollow Drive
Santa Ana, CA 92705

PIPELINE®

Operating System: MicroVMS, VMS
Keywords: • Mechanical engineering • Simulation

Memory required: 450KB. Distribution media: magnetic tape, disk, diskette.

This stiffness (finite element)–based piping analysis program calculates stresses, forces, and displacements in piping systems subjected to various static and dynamic loads. PIPELINE, written in FORTRAN, increases piping engineering productivity with free-format input, compliance checks for ANSI and ASME codes, spring hanger design, graphics, and other time-saving features.

Price: Available upon request
Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

PIPENET

Operating System: MicroVMS, VMS
Keywords: • Chemical • Flow analysis • Nuclear • Petroleum

This program, used by process, oil, nuclear, power-generation, and fire-protection industries, calculates pressure drops and flow distribution in pipe networks. The flow is assumed to be single phase and can be compressible or incompressible. This user-friendly program can be run in interactive or batch mode and offers a choice of output styles and simple materials take-off tables.

PIPENET has built-in properties for water (varying with temperature changes in the network), steam, and gases. The product has a module developed specifically for fire-protection systems complying with NFPA and FOC rules. Typical items in the network are pipes, pumps, fans, nozzles, orifice plates, filters, strainers, and deluge valves. Libraries of pumps, fans, standard pipes, nozzles, roughness factors, pipe-lining characterization, and so forth can be created. In addition, the regression of points from curves can be carried out.

Price: $30,000
Contact: Dr. D. J. Sebastian
(0223) 311284
SUNRISE SYSTEMS LTD.
High Cross, Madingley Road
Cambridge CB3 OHB
England

PIPERUP

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Mechanical engineering • Nuclear

This program performs nonlinear elastic-plastic analysis of 3-dimensional piping systems subjected to concentrated static or dynamic time-history forcing functions. These forces may result from a fluid jet thrust at the location of an estimated rupture of high energy piping.

Special features include:

- A general-purpose 2-node gap element that may be used to model pipe-whip restraint mass or simulate pipe discontinuities. Restraints may function in tension as well as in compression.
- An iterative time-step optimization scheme that is invoked when status changes, as in pipe yielding or restraint contact, occur.
- A new formulation of the Newmark incremental direct-integration scheme that eliminates equilibrium errors that stem from the use of stiffness proportional damping.
- An analysis of either circumferential or longitudinal pipe breaks. Both portions of the severed pipe system can be analyzed for circumferential breaks with unequal blowdown forces in the same computer run.

A user may input arbitrary values or may select ASME or ANSI factors from the program to simulate stress intensification and flexibility. A user selects either inclusion or exclusion of pipe deadweight.

The model also has normal pipe supports and plastic failure mechanisms, provides restart and plotting capabilities, prints an envelope of maximum/minimum results, and offers analysis results in either English or metric units.

Price: $5000 – $67,000
Contact: John R. Nardello
(408) 866–4510
QUADREX CORP.
1700 Dell Avenue
Campbell, CA 95008

PISCES (Physics International Scientific Codes and Engineering Services)

Operating System: VMS
Keywords: • CAD/CAM • Flow analysis • Mechanical engineering • Nuclear

The PISCES finite difference computer codes help solve complex dynamic problems involving geometric and material nonlinearities, large strain, and large deformation. Material nonlinearities include plasticity, thermal softening, failure, multiphase fluid, and gauge behavior.

Applications include projectile impact and penetration, shock or blast wave and detonation studies, warhead design (such as shaped charge or self-forging fragment), behavior of a structure under high acceleration, hydrodynamic loads and fluid-structure interaction, and more. The PISCES codes are fully supported, well documented, and easy to use. PISCES is used in ordnance design, defense, aerospace, transportation, nuclear reactor design and safety, and petrochemical industry safety.

Complex dynamic problems can be modeled in fully coupled reference frames and can be solved in one computation. Those reference frames include Euler, Lagrange, thin shell, and rigid-body processors, so that problems with complex geometry can be easily modeled.

The PISCES codes are written in FORTRAN–77 and have been installed in both mainframe and minicomputers. The memory requirement is application dependent and can be varied for improved efficiency. The standard setup for the central and the extended memories is 7000 and 2,000,000 words, respectively.

The PISCES computer codes, proprietary to Physics International Company, are maintained and distributed by PISCES International Company B.V. of the Netherlands. MSI is the representative of PISCES in North America.

Price: $30,000/yr
Contact: Frank Chang
(703) 435–6600
MARTIN & STERN, INC.
2875 Towerview Road
Herndon, VA 22071

PORTAL–FRAME

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering
• Structural engineering

This program, used to design structural steel single and multispan portal frames, accepts a range of geometry and also allows haunches at the apex and eaves. Bases may be fixed or pinned, but tied frames are not allowed. Section sizes for U.K. standards grades 43 and 50 steel are inbuilt, or a designer may substitute his/her own steel sections data.

The analysis/design technique, a minimum-cost, ultimate-strength method, includes a stability check of each member and a linear elastic check on the stresses and deflections of the resulting frame. The design process is iterative until a suitable combination of sections is found.

Frame loading includes dead and superimposed loads, wind loads, crane vertical and surge loading, and randomly placed point loads and moments.

Results include section and haunch sizes selected; stability checks; plastic hinge positions; reactions; deflections; axial, shear, and moments at factored and working load; and stresses and line printer plots of bending-moment diagrams (factored, working, and elastic).

Price: $5000

Contact: Tony Craddock
(0509) 261519
LAMP SOFTWARE LTD.
Loughborough Technology Centre, Epinal Way
Loughborough, Leicestershire LE11 OQE
United Kingdom

Predictor

Operating System: VMS

Keywords: • Diagnostics • Electronic • Mechanical engineering

Predictor represents a set of more than 11 computer programs used in the evaluation of systems of electronic and mechanical components. Predictor provides reliability estimation (Mil-HDBK–217B/C/D and other methods), maintainability estimation at multiple echelons with multiple tasks, cataloging of parts to reduce inputs, failure modes and effects analysis to filter nonrelevant failures, parts lists to aid in design to cost, failure rate analysis from failure reports, and a report analysis program to assist in information retrieval.

Predictor is the most widely used computer program for evaluation engineering. The programs are fully supported, with ongoing training classes, documentation, and support to users.

Due to its internal cataloging capability of more than 10,000,000 parts and formula methods and external cataloging for unique parts, the Predictor programs easily handle any parts list. A unique data capability produces information in sortable and reportable order.

Price: $15,000 – $50,000

Contact: Jim Tanzola
(505) 255–8611
MANAGEMENT SCIENCES, INC.
6022 Constitution, N.E.
Albuquerque, NM 87110

Professoinal Management Information System for Architects/Engineers

Operating System: VMS

Keywords: • Accounts receivable • Billing • Cost accounting • Payroll

Distribution media: 9-track magnetic tape, RL02, TU58 DECtape II cartridge.

This system is used to track costs, revenue, accounts receivable, and work in process on a job-by-job basis. Labor, materials, and subcontractor costs are categorized with ways of allocating overhead. Automatic interfaces are provided with payroll, accounts payable, accounts receivable, and general ledger.

The system, developed for the design firm with 15 or more employees, is menu driven, fully interactive, transaction oriented, and user friendly. Other features include multilevel password security, labor productivity reporting, summary reports for management, detail reports for analysis, demand inquiry capabilities, and survey crew billing and labor allocation.

Price: $10,000 – $25,000
Contact: Linda Mizell
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

Project Time Management

Operating System: VMS
Keywords: • Accounts receivable • Architecture • Billing • Project management

This system for architects and engineers maintains records for each employee, client, project and project type, phase and task within a project, staff and departmental assignment, and activity performed by your firm. The system also records and posts each time, expense, and accounts receivable transaction by client and project; allows adjustment of work-in-process and billing amounts; prints detailed or summarized statements in several user-selected formats; and ages accounts receivable and unbilled time-and-expense transactions and prints valuable aging reports.

Your ability to manage projects depends on the amount and quality of your information. This system provides you with extensive management data as it collects and reports on project and staff activities on a month-to-date, year-to-date, and since-opening basis; analyzes billings and time-and-expense transactions; issues reports on productivity and profitability within project and staff types; and fully integrates with Alpine's Accounts Payable, Payroll, and General Ledger systems, enabling simplified 1-time entry of time-and-expense transactions.

A version of this product is available for the PDP–11 computer.

Price: $13,000 – $18,000
Contact: Byron Wilkes, Marketing Manager
(503) 641–8100
ALPINE DATASYSTEMS, INC.
8043 SW Cirrus Drive
Beaverton, OR 97005

PROPIPE

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Mechanical engineering • Petroleum

Memory required: 512KB virtual or physical. Distribution medium: 9-track magnetic tape.

This user-friendly program, written in ANSI FORTRAN–77, is for the design of fossil plant, petrochemical, and pipeline piping systems. PROPIPE performs linear elastic analysis for deadweight, thermal expansion, concentrated forces, support displacements, seismic inertia, and wind loads. Data is entered by an easy-to-use free-format input scheme.

PROPIPE performs stress analysis in accordance with the B31.1, B31.3, B31.4, and B31.8 ANSI/ASME codes and generates rotating-equipment compliance reports for API–610, API–617, and NEMA SM–23 standards. Isometric geometry plots can be generated with facilities for rotating and windowing the views.

Price: $2500 – $35,000
Contact: John R. Nardello
(408) 866–4510
QUADREX CORP.
1700 Dell Avenue
Campbell, CA 95008

PRTHRUST

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Mechanical engineering • Nuclear

This thermal-hydraulics program determines the fluid blowdown-force-time histories that act on a pipe following a postulated pipe rupture and the jet-impingement force at the break plane used for evaluating safety-related structures and equipment subject to jet-impingement loads. PRTHRUST is a 1-dimensional finite-difference program based on RELAP, an NRC-accepted loss-of-coolant accident program.

All major piping components in the system can be modeled and include the reactor, steam generators, turbine, piping cross-tie headers, valves, and pumps. Pumps can continue to operate or coast down. Valves can be opened or closed and can follow prescribed pressure loss–flow characteristics.

Price: $1500 – $25,000
Contact: John R. Nardello
(408) 866–4510
QUADREX CORP.
1700 Dell Avenue
Campbell, CA 95008

PSD Optical Analysis Program

Operating System: VMS
Keywords: • CAD/CAM • Optics • Scientific

This program, written in FORTRAN, evaluates and optimizes optical systems. Oriented to the needs of the optical systems engineer, PSD features holographic diffraction gratings, nonspherical surfaces, rectangular cross-section light pipes, arbitrary translation and rotation of surfaces, fresnel-loss calculation, and radiometry, including throughput and power distribution at detector. Also featured is general ray-tracing evaluation; system improvement, using Fletcher-Powell optimization, and user-defined optical components and analyses (optional).

The program can be used to design radiometers, spectrometers, illumination systems, off-axis systems, and conventional lenses. The extensive use of ray tracing improves the accuracy of the results. A consistent sign convention for rotations and translations makes using those features easy.

Price: $3000
Contact: James W. Horwitz
(716) 671–5900
MENDON RESEARCH CO.
1260 Creek Street
Webster, NY 14580

PSS/E (Power System Simulator Program)

Operating System: VMS
Keywords: • Data base management • Simulation • Utilities

PSS/E, a 12,000-bus fully interactive power system simulation facility, provides utility-planning and design engineers with advanced capabilities for:

- Load flow with d.c. transmission, multiple generators at a bus, adjustable load-voltage characteristics, and planning-level economic dispatch.
- Stability/dynamic simulation, including highly detailed machine, nonlinear load, relay, d.c. transmission, and supplementary controls modeling.
- Short circuit, balanced and unbalanced, allowing simultaneous unbalanced faults.
- Equivalent construction for load flow, dynamic simulation, and fault analysis.
- Working data base management by complete integration of all processing functions with a common problem-oriented library of "cases," including load flow, dynamics, and fault data.
- Graphic display of data and results on hard copy and CRT units. Displays include load flow 1-line diagrams, dynamic simulation plots, and bus data summaries.

PSS/E serves computers that are dedicated to power system engineering and planning. The system is useful in situations requiring consideration of a variety of problems and types of equipment.

Price: Available upon request

Contact: T. F. Laskowski
(518) 374–1220
POWER TECHNOLOGIES, INC.
P.O. Box 1058
Schenectady, NY 12301

Rave

Operating System: VMS

Keywords: • CAD/CAM • Data conversion • Graphics

This raster-to-vector conversion software system converts raster data from a scanning input device to vector data compatible with most interactive graphics systems (CAD).

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: W. C. Schmidt
(215) 328–1040
BROOMALL INDUSTRIES, INC.
700 Abbott Drive
Broomall, PA 19008

RES

Operating System: VMS

Keywords: • Calculation aids • Documentation • Process control • Simulation

RES automates MIL–HDBK–217, "Reliability Prediction of Electronic Equipment." The program serves the design and development environment and is oriented toward modern equipment architectures — assembly, unit, subsubsystem, and system. Starting with a human-engineering screen format, the user inputs the basic part reliability drivers — typically environment, temperature, quality level, and stress. RES is then run on the user-created data file and provides the usual reliability indexes of mean time between failures (MTBF) and probability of mission success $R(t)$.

For organizations whose products are reliability sensitive and for groups performing reliability assessments, RES allows equipment reliability simulation driven by environment, temperature, and part-quality changes. That leads to tradeoffs between competing factors and the all-important cost factor. Output from RES may be used for life cycle cost (LCC) work in determining logistics drivers and establishing maintenance factors.

RES resides on a single 8″ floppy disk (a test demonstration disk is also supplied) that is loaded into the system. The user then creates a data file on a separate disk for the specific equipment of interest. Options are provided that, for example, calculate the percent failure rate for each part type and the leading highest failure rate parts. A simple language consisting of only five basic commands allows input processing and output control. Because of the 80-column screen format, identical hard-copy forms may be prepared and checked off and input to the computer system when convenient.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: M. E. Drapier
(613) 836–7360
RMI
P.O. Box 13299
Kanata, Ontario K2K 1X4
Canada

RES 2 (Reservoir Routing)

Operating System: VMS
Keywords: • Civil engineering • Environmental • Geoscience

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

RES 2 performs standard reservoir flood routing through multiple linear reservoirs. The maximum number of reservoirs is three. Source code (FORTRAN IV) is available.

A version of this product is available for the PDP–11 computer.

Price: $450
Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

Results

Operating System: VMS
Keywords: • CAD/CAM • Decision support • Graphics • Simulation

This computer-aided analytical tool includes, but has wider applications than, Fault Tree Analysis. Results, written in FORTRAN–77, is useful to design engineers, systems analysts, safety analysts, and reliability/maintainability engineers who model system outcomes.

Results allows graphic display of models, as well as single and multi-point failure modeling, and quantitative analysis of success probabilities and failure rate information. Results will model practically any system outcome to include defects in design, material, and accidental phenomena.

Price: $10,000/yr – $30,000/yr
Contact: James R. Tanzola
(505) 255–8611
MANAGEMENT SCIENCES, INC.
6022 Constitution Avenue, N.E.
Albuquerque, NM 87110

REWALL (Retaining Wall Design)

Operating System: VMS
Keywords: • Civil engineering • Mathematics • Structural engineering

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

REWALL designs cantilevered concrete retaining walls according to ACI code. Ultimate strength design is used. Input consists of wall height, trial toe, heel, and base dimensions; soil parameters; and steel and concrete constants. Output consists of final dimensions, sliding and overturning factors of safety, and reinforcing percentages required.

A version of this product is available for the PDP–11 computer.

Price: $400
Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

RKLIN (Linear System Simulation: Runge-Kutta)

Operating System: UNIX* (Berkeley, System III, System V), VMS
Keywords: • Biology • Mathematics • Research • Simulation

This interactive FORTRAN program solves any set of n linear, constant-coefficient, or ordinary differential equations, where n is limited only by the host machine's memory capacity. Step (constant), impulse, and impulse-train inputs are provided as standard options. Other inputs can be easily implemented.

The algorithm is a variable-step, fifth-order Runge-Kutta procedure. Program input and output are self-explanatory. The user interactively enters the number of equations, input type, parameter values, and initial values of the n variables. Telephone demos are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $350 – $750

Contact: Dr. Joseph J. DiStefano III, Professor
(213) 825–7482 or 825–4033
UNIVERSITY OF CALIFORNIA, LOS ANGELES
School of Engineering and Applied Science
Biocybernetics Laboratory, 4731K Boelter Hall
Los Angeles, CA 90024

Romulus

Operating System: VMS

Keywords: • CAD/CAM • Chemical

This interactive 3-dimensional solid-modeling system, written by Shape Data Ltd. of Cambridge, England, allows an engineer to model geometric component shapes and to perform geometric computations, such as the moment of intertia on the shape. Romulus is a boundary modeler and allows the engineer to construct models using edge-based construction, Boolean operations, sweeping (linear and rotational), gluing, and local operations (blend, chamfer, and sectioning).

Price: $30,000

Contact: Kevin Auger
(801) 582–5847
EVANS & SUTHERLAND
580 Arapeen Drive
Salt Lake City, UT 84108

Romulus2 Mechanical and Industrial Design System

Operating System: ULTRIX–32, VMS

Keywords: • CAD/CAM • Graphics • Mechanical engineering

This interactive 3-D design system is based on a solid modeler. This system helps the designer create a complete and accurate product description of an assembly or component and provides powerful facilities for representing object shapes and performing geometric computations on those components. Romulus2 also uses an associated data base to hold nongeometric information about displayed models, such as material type and surface finishes. Mass properties, arbitrary sections, and clash detection are all performed automatically.

Price: £17,000 – £45,000

Contact: Dr. A. W. Bishop
—
SHAPE DATA LTD.
2 All Saints Passage
Cambridge CB2 3LS
United Kingdom

S541/S641 APOGEE

Operating System: VMS
Keywords: • Data collection • Instrumentation • Nuclear • Scientific

APOGEE collects and analyzes complicated Ge(Li) and HpGe gamma spectra. Written in FORTRAN IV/VAX–11, the software has been optimized for speed and employs a user-friendly, menu-driven format. Extensive help commands allow infrequent users to operate the software with minimal training. Command language operation is available for frequent users who prefer not to use the menu structure. Both immediate-mode and extensive batch-file operations are supported. Preprogrammed batch files permit job stream operation for routine laboratory applications. That feature allows tasks to be defined by system users and executed through simple commands.

Routines are included for calibrating the system, searching for peaks, calculating peak centroids, determining net areas, resolving multiplets, identifying nuclides, calculating specific activities for each unit of volume, minimum detectable activities, lower limit of activities, maximum permissible concentration, and iodine activity equivalency. The LLD calculation complies with the method defined by the U.S. Nuclear Regulatory Commission.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $9000
Contact: Steve Starbala
(203) 238–2351
CANBERRA INDUSTRIES, INC.
One State Street
Meriden, CT 06450

SAMSAN

Operating System: VMS
Keywords: • CAD/CAM • Mechanical engineering • Numerical analysis • Robotics

SAMSAN consists of modern numerical methods for classical sampled system analysis. A self-consistent set of computer algorithms support large order control system design and evaluation studies. SAMSAN reduces the burden on the analyst by providing a set of algorithms that have been well tested and documented and that can be readily integrated for solving control system problems. Algorithm selection for SAMSAN has been biased toward numerical accuracy for large order systems, with computational speed and portability being considered important but not paramount.

In addition to containing relevant subroutines from EISPAK for eigenanalysis and from LINPAK for the solution of linear systems and related problems, SAMSAN permits reduction of a real nonsymmetric matrix to block diagonal form through a real similarity transformation matrix that is well conditioned with respect to inversion; solution of the generalized eigenvalue problem with balancing and grading; computation of all zeros of the determinant of a matrix of polynomials; matrix exponentiation and the evaluation of integrals involving the matrix exponential, with option to first block diagonalize; root locus and frequency response for single-variable transfer functions in the S, Z, and W domains; several methods of computing zeros for linear systems; and on-demand document generation.

Price: $1200

Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

SASI–VOL'Q

Operating System: VMS

Keywords: • Calculation aids • Civil engineering • Construction • Structural engineering

This set of earthwork programs, written in FORTRAN–77, allows the user to proceed through an earthwork problem, including data acquisition and entry, design, calculation, and reporting. Interactive data entry includes vertical and horizontal control and adjustment with optional graphic representation to scale of boundaries, HIs, benchmarks, and more. Data may be entered directly from field survey notes. Design is also done interactively and allows the user to specify and calculate finished elevation data with options for modification. Calculations use average end area volumetrics and can be used to calculate volumes of borrow pits, stockpiles, dredgings, foundations, ditches, or other types of volume computation. The output includes reporting by station of cut/fill end areas, volumes, accumulated volumes, and mass haul; staking information, including cross-overs or daylight lines; and plotted output by cross section of existing and finished elevations at user-specified horizontal and vertical scales.

Price: $2000 – $5000

Contact: Earl Tankersley
(602) 839–9075
SOUTHWEST ANALYTICAL SYSTEMS, INC.
P.O. Box 50238
Phoenix, AZ 85076

SBEAM

Operating System: VMS
Keywords: • Architecture • Civil engineering • Construction • Structural engineering

The SBEAM program designs steel members subject to major axis bending. The program can take virtually any type or combination of locking on the beam and can handle various end coordinations. Output includes paged calculations with bending, shear, equivalent stress, and deflection checks, suitable for checking authorities. Sections are automatically selected from BCSA section tables or user-defined lists. The interactive program operation gives the engineer complete control of the design process.

Price: Available upon request
Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

SCADA (Structural Computer-Aided Design and Analysis)

Operating System: VMS
Keywords: • Civil engineering • Mechanical engineering • Structural engineering

This finite element program, developed by Scada Systems Corp., provides linear and nonlinear analysis, statics and dynamics, 2D and 3D, out-of-core algorithms, interactive and menu-driven preprocessors, heat transfer, buckling, cylindrical and spherical generation, alternative coordinate systems, graphic and numeric data base reporting, and steel and concrete postprocessors. The library includes beam and truss, 8- to 29-node solid, an isotropic plate, an orthotropic shell/plate, axisymmetric plane strain, and plane stress elements.

Price: Available upon request
Contact: Ghassan Dib
(213) 477–6751
AMERICAN COMPUTERS & ENGINEERS, INC.
11726 San Vicente Boulevard
Los Angeles, CA 90049

SDRC® FATIGUE™

Operating System: VMS
Keywords: • Civil engineering • Mechanical engineering

This software uses predicted and/or measured strain data and material property information to predict product life under various conditions. That kind of fatigue information can help engineers design products that meet stringent requirements for maximum life expectancy, energy efficiency, and cost effectiveness.

FATIGUE™ is a trademark of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

A version of this product is available for the PDP–11 computer.

Price: $8000 – $20,000 or $500 – $900/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® FRAME™

Operating System: VMS
Keywords: • Architecture • Graphics • Mathematics • Structural engineering

The FRAME family of interactive beam analysis programs helps engineers perform static, dynamic, limit, and buckling analysis of complex frame and truss structures. Complete diagnostics and geometric displays provide fast model debugging. Flexible output displays mean that results can be readily interpreted.

FRAME™ is a trademark of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

Price: $30,000 or $1100/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® GEOMOD™

Operating System: VMS
Keywords: • CAD/CAM • Graphics • Mathematics • Mechanical engineering

This convenient, interactive solid modeling tool helps engineers construct realistic geometric models to design components and assemble them into total systems inside the computer. Using GEOMOD's powerful mathematical, kinematic, and display capabilities, users can quickly and efficiently explore alternative design concepts and generate a physical "feel" for their designs. Geometric information created in GEOMOD can be interfaced through a shared data base with other GE–CAE International products for engineering analysis. Data interface to major CAD/CAM systems through IGES files is also possible.

Key features include solid geometry creation, system assembly, programmability, hybrid geometry creation, kinematics property calculations, special shaping and skinning operations, and multiple display options.

GEOMOD™ is a trademark of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

Price: $30,000 – $60,000 or $1350 – $2700/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® I–DEAS™ (Integrated Design Engineering Analysis Software)

Operating System: VMS
Keywords: • CAD/CAM • Mathematics • Mechanical engineering • Simulation

This integrated software package offers a full range of functionality for engineering design and analysis. The entire design process, from initial conceptual design to handoff to CAD/CAM systems, can be performed with the I–DEAS package. I–DEAS software includes the full array of capabilities found in GE–CAE International's proprietary computer-aided engineering software programs: SDRC GEOMOD,™ SUPERTAB,™ SUPERB,™ SYSTAN,™ and MODAL–PLUS.™ Those programs are integrated into I–DEAS with consistent user interfaces and a shared data base. Capabilities include solid modeling, finite element modeling and analysis, system dynamic analysis, frame analysis, modal analysis, mechanism analysis, and fatigue analysis.

I–DEAS,™ GEOMOD,™ SUPERTAB,™ SUPERB,™ SYSTAN,™ and MODAL–PLUS™ are trademarks of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

Price: $85,000 – $170,000 or $4000 – $8000/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® MODAL–PLUS™

Operating System: VMS
Keywords: • Data collection • Mechanical engineering • Simulation

This interactive software package is used to collect, analyze, and display data from controlled excitation tests. In MODAL–PLUS, a physical model is vibrated by an exciter through a range of frequencies to test system dynamics. MODAL–PLUS software then creates a mathematical model of the prototype's performance. That model can be compared to an analytical model or used directly to solve noise, vibration, and failure problems.

MODAL–PLUS™ is a trademark of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

A version of this product is available for the PDP–11 computer.

Price: $14,000 – $28,500 or $1300 – $2500/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® POLYCOOL™

Operating System: VMS
Keywords: • Manufacturing • Quality control

This interactive software tool is used to optimize the cooling circuitry in thermoplastic injection molding. Plant operating personnel and plastic mold designers use POLYCOOL to predict the efficiency of mold-cooling functions.

POLYCOOL™ is a trademark of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

Price: $30,000 or $1650/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® SABBA™

Operating System: VMS
Keywords: • Debugging • Mechanical engineering • Simulation

This system-dynamic analysis package is used to debug prototypes conveniently and efficiently by computer simulation. The mathematical representation of the system that SABBA creates can be analyzed to predict its natural frequencies and modes of vibration. Then, to help engineers understand the impact of changes to the product's physical properties, modifications can be made to the computer model and the impact of those changes automatically calculated in SABBA.

SABBA™ is a trademark of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

A version of this product is available for the PDP–11 computer.

Price: $20,000 or $1100/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® SUPERB™

Operating System: VMS
Keywords: • Mechanical engineering • Scientific • Structural engineering

This general-purpose finite element program has superior capabilities for static and dynamic structural analysis and heat conduction analysis. SUPERB's extensive library of isoparametric and conventional finite elements makes modeling and analysis of both simple and complex structures convenient and efficient. When SUPERB is coupled with SUPERTAB,™ extensive output display capabilities make it easier for engineers to interpret complex results.

SUPERB™ and SUPERTAB™ are trademarks of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

Price: $25,000 or $1100/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® SUPERTAB™

Operating System: VMS
Keywords: • CAD/CAM • Graphics • Mechanical engineering • Pre- and postprocessors

This interactive pre- and postprocessing finite element modeling program frees designers and analysts of the routine demands of model preparation and results interpretation. Unique features of SUPERTAB software include TRIQUAMESH, an enhanced mesh generator for irregular surfaces; Model Solution for model analyses within the program; and integration with both SDRC GEOMOD™ for solid 3-D geometry transfer and other GE–CAE International software programs. Data interface to major CAD/CAM systems through IGES files is also possible.

SUPERTAB™ and GEOMOD™ are trademarks of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

Price: $25,000 – $50,000 or $1250 – $2300/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SDRC® SYSTAN™

Operating System: VMS
Keywords: • Graphics • Mathematics
• Mechanical engineering

This interactive design-oriented analysis tool combines component models from a complex mechanical structure into a single model to mathematically predict overall the system's dynamic performance. Unlike traditional computerized analysis techniques that require several programs to complete the process, SYSTAN can be used to construct and verify the system model, determine system characteristics, and evaluate system performance, interactively, with a single program.

SYSTAN™ is a trademark of SDRC. SDRC® is a service mark of Structural Dynamics Research Corporation.

Price: $40,000 or $2000/mo
Contact: Marketing Services
(513) 576–2400
GENERAL ELECTRIC CAE INTERNATIONAL INC.
300 TechneCenter Drive
Milford, OH 45150

SEWER — Integrated Sewer Design System

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering • Construction

This computer-aided design system provides a practical, fast, and economical method for the designing, cost estimating, and profile plotting of sanitary sewer networks. The user can retain complete control of the design. SEWER can be applied at any stage of a project and includes feasibility studies, preliminary designs, and final designs. The total system includes five major subprograms that can be linked when a complete design is required or that can be used individually for particular design phases. SEWER is useful to consulting engineers, land planners, and municipal and other reviewing and regulatory agencies.

Price: $4500
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

S/FILSYN (General Filter Synthesis Package)

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Electrical • Electronic

This package is used for the synthesis, design, and analysis of electrical filters, delay equalizers, and impedance-matching networks. These may be realized in passive LC, active RC, microwave, or digital forms.

The program can design low-pass, high-pass, band-pass, and band-reject filters with arbitrary specifications and terminations with or without predistortion. The passive LC realizations may be lattice, ladder, or lattice-ladder combination in computer or user-specified forms. Design data may be stored on disk or passed to other programs. Analysis results may be tabulated or displayed in graphical form.

The program is indispensable to anyone in the communications or component field who has to design, analyze, and build filters of any kind. The program is highly modular, and additional features may be added easily.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $12,500 – $25,000
Contact: Dr. George Szentirmai
(408) 554–1469
DGS ASSOCIATES
1353 Sarita Way
Santa Clara, CA 95051

SFUN/LIBRARY

Operating System: VMS
Keywords: • Mathematics • Research • Scientific • Statistics

SFUN/LIBRARY, written in FORTRAN, evaluates special functions that arise in applied mathematics, physics, engineering, and other technical fields. With more than 180 user-callable function subprograms and subroutines, the system evaluates more than 80 special functions, including fundamental, elementary, trigonometric, hyperbolic, gamma and related, exponential integrals and related functions, and Bessel functions of a fractional order.

Price: $1400
Contact: Sales Division
(713) 772–1927
IMSL, INC.
7500 Bellaire Boulevard, NBC Building
Houston, TX 77036

Shaft: Stress Calculations

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Manufacturing • Mathematics • Mechanical engineering

Memory required: 64K minimum.

This design-analysis program, written in MACRO, calculates the maximum resultant stress in a shaft when a set of loads is applied, such as those normally found on shafts on gearboxes or working shafts in machinery. The shaft may be round or tubular if there are torsional loads, such as on a gearbox or motor shaft, or square if there are no torsional loadings on the shaft.

Shaft calculates the dead-weight stresses due to the center of gravity of the shaft for steel shafts and does the resolution of complex forces into the single equivalent maximum tensile stress.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

SILOS

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Simulation

This logic and switch-level simulator, designed for the gate-level systems designer and the transistor-level MOS/VLSI engineer, performs logic and fault simulation in interactive and batch modes. Interactive use includes optional menu mode and on-line help.

SILOS data primitives include network-level devices, logic-level gates, and high-level functions. Inputs to the network can be specified as individual clocks or as binary/hexadecimal tables. Macros can be defined and nested up to 16 levels. SILOS uses a unique 12 + 4 state concept that allows accurate modeling of bidirectional logic, wired-ORs, charge sharing, and node-charge decay.

Event-driven logic simulation can be performed with zero or with finite delays. SILOS allows the user to simulate up to a timepoint, to look at arbitrary outputs, then to continue the simulation. Output can be in separate and/or combined tabular and graphical formats. In addition, SILOS can generate summary tables of all node states, node spikes, unknown states, and activity levels. Sentry tester interface outputs can be requested.

SILOS uses a sophisticated concurrent fault simulation algorithm to model both input-stuck and output-stuck faults. For the fault simulation of very large networks, statistical fault simulation can be used to greatly reduce execution time.

Price: $24,000 – $109,000
Contact: Paul Giordano
(702) 831–1399
SIMUTEC
920 Incline Way, Box 3400, Building #2, 2nd Floor
Incline Village, NV 89402

SIMIC (MOS IC Circuit Simulator)

Operating System: UNIX* (Berkeley), VMS
Keywords: • CAD/CAM • Electronic • Simulation

Distribution media: magnetic tape, RX02, TU58 DECtape II cartridge.

SIMIC, designed for transient simulation of MOS circuits, has a capacity of 1000 transistors and up to 500 resistors, cross-coupled capacitors, or diodes. Twenty power supplies and 20 clocks can be specified. The program can handle circuits with up to 580 working nodes, in addition to those specified as clocks or power supplies. The program can also handle up to 10 device types, enabling the designer to work on NMOS, PMOS, and CMOS technologies.

Menu driven and fully interactive, SIMIC allows a designer to rapidly gain an appreciation of the performance of a proposed circuit. The modeling algorithm ensures convergence for either manual or auto-time-step control. SIMIC can use the results of the parameter extraction program, MOSFIT.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $20,000
Contact: Ray St. Laurent, Technical Specialist
(613) 836–3134
MOSAID INC.
P.O. Box 13579
Kanata, Ontario K2K 1X6
Canada

SINDA (Systems Improved Numerical Differencing Analyzer with SINFLO)

Operating System: VMS
Keywords: • Energy • Mathematics • Numerical analysis • Scientific

SINDA was developed for solving physical problems governed by diffusion-type equations that can be modeled by lumped parameter representation. The system is used as a general thermal analyzer with resistor-capacitor network representations but may be adapted to problems represented by differential equations, such as Fourier, Poissons, or LaPlace equations. SINDA can numerically solve almost any set of ordinary differential equations that may be used to represent the transient behavior of a lumped parameter system or any set of nonlinear algebraic equations that might represent the steady conditions

of a physical system. For user decision flexibility, SINDA offers a number of numerical solution techniques; those include such finite-difference formulations of the explicit method as forward-difference explicit approximation, DuFort-Frankel approximation, exponential approximation, and alternating direction approximation, as well as such formulations of the implicit method as backward-difference implicit approximation and Crank-Nicolson approximation.

Most of the subroutines in the SINDA library were developed for solving thermal analysis problems. As a thermal analyzer, SINDA can handle such interrelated complex phenomena as sublimation, diffuse radiation within enclosures, transport delay effects, sensitivity analysis, and thermal network error correction. Special subroutines, the SINFLO group, are included in the SINDA library to facilitate the thermal analysis of systems incorporating fluid flow networks. SINDA can easily account for pumps, valves, and heat exchangers during a thermal analysis.

Price: $3400/10-yr lease
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

SLAM II®

Operating System: VMS
Keywords: • Aeronautics/aerospace • Graphics • Manufacturing • Simulation

SLAM II is a FORTRAN-based simulation language that allows alternative approaches to modeling. SLAM II permits any combination of network, discrete event, and continuous modeling perspectives. The graphical (network) framework decreases model building, analysis, and communication time. Numerous interfaces to FORTRAN programming inserts are supported, allowing for expanding levels of model complexity.

SLAM II is fully supported, with more than 300 sites worldwide. Many academic institutions teach courses in simulation with our text and software.

Price: $6000
Contact: Customer Service Dept.
(800) 428–7636
PRITSKER & ASSOCIATES, INC.
P.O. Box 2413
West Lafayette, IN 47906

SOLVE

Operating System: VMS
Keywords: • Civil engineering • Construction • Manufacturing • Metals

SOLVE is a general engineering analysis package that documents deflections and forces in various structures, including 2-dimensional plane frames and grillages, 3-dimensional space frames, and pin-jointed trusses. A number of graphical features are included. This package applies to construction; iron, steel, and metal manufacturing; and fabrication markets.

Price: Available upon request
Contact: A. J. Beveridge
(0274) 391076
CSC — COMPUTER SERVICES CONSULTANTS (UK) LTD.
"Ash Court," 2 Ash Grove, Great Horton Road
Bradford, West Yorkshire BD7 1BN
England

SPAR (Structural Performance Analysis and Redesign)

Operating System: VMS
Keywords: • Architecture • Environmental • Mechanical engineering • Scientific

This system performs stress, buckling, vibration, and thermal analyses of large linear finite element structural models (some exceeding 50,000 degrees of freedom) while minimizing processing cost, execution time, central memory storage, and secondary data storage through sparse matrix solution techniques and other computational and data management procedures. In contrast to the many data files in conventional finite element systems, the more than 25 SPAR processors (programs) store and retrieve information and communicate through a unified data base. The general-purpose matrix, data base, and analysis utilities permit significant user control and flexibility in solving problems. An example of such control and flexibility is the built-in capability for users to modify control parameters (iteration and convergence controls) at the initiation of calculations in each processor. That capability can reduce unnecessary calculations and permit the user to adjust parameters based on "just computed" results. SPAR can be executed in both batch and interactive modes.

The SPAR structural element library includes a very general class of beam elements (offsets for shear center and centroid, effects of transverse shear stiffness, and nonuniform torsion), 3-node and 4-node plate/shell membrane and bending elements (isotropic, anisotropic, or composite laminate), 6-node and 8-node brick (3-dimensional elements), and fluid elements. Elements may be defined singly or through a variety of network generators, or combinations thereof, by specifying the joints to which they are connected and pointers to applicable

entries in tables, such as section properties and material constants. Efficient eigensolver techniques often allow the same finite element model to be used for both static and dynamic analyses.

The graphics capabilities include undeformed, deformed, and vibrational-mode plots of the structure and plots of the structure modeling, including node and element labeling.

Price: $4100/10-yr lease
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

Speakeasy

Operating System: VMS
Keywords: • Decision support • Graphics • Mathematics • Statistics

This high-level general-purpose computational language provides trained engineers or scientists but novice computer users with the tools needed to solve problems quickly and interactively. Built around the concept of structured objects as elements, Speakeasy provides array and matrix algebra and a large vocabulary of familiar words to manipulate those objects as a whole.

Words in the user-generated, library-oriented Speakeasy vocabulary are precompiled and prelinked packages that are distinct from the Speakeasy processor. During execution, the use of a word transfers control to the corresponding library member. Those words provide almost all of the capabilities found in subroutine libraries that are associated with standard computer languages. Users may add new words to the local vocabulary to tailor the system.

An existing vocabulary of some 1000 words is contained in this release. Included is a complete vocabulary oriented toward scientific and engineering calculations, including interactive graphics.

Support for ReGIS graphics and the VAXstation is part of the basic system. Time-series capabilities and many statistical operations are also available. Full on-line documentation provides self-teaching tools at several levels.

Price: $2400 – $6500
Contact: Stanley Cohen
(312) 346–2745
SPEAKEASY COMPUTING CORP.
222 West Adams Street
Chicago,IL 60606

SPICE2

Operating System: MicroVMS, VMS
Keywords: • Electrical • Electronic • Simulation

SPICE2 is a general-purpose circuit simulation program for nonlinear dc, nonlinear transient, and linear ac analyses. Circuits may contain resistors, capacitors, inductors, mutual inductors, independent voltage and current sources, four types of dependent sources, transmission lines, and the four most common semiconductor devices: diodes, BJTS, JFETS, and MOSFETS.

U.S. government export regulations prohibit distribution of this program outside the United States without appropriate export licenses. DECUS number VAX–6.

Note: Some small bugs were fixed for this maintenance-release version.

Price: $5 – $225
Contact: DECUS (see Introduction)

SPIPE (Circular Pipe Analysis)

Operating System: VMS
Keywords: • Civil engineering • Flow analysis

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

SPIPE computes the hydraulic elements for circular pipes. Input consists of pipe size, slope, roughness coefficient, and intervals desired. Output includes flow, velocity, area of flow, depth of flow, and so on. Gravity flow is considered.

A version of this product is available for the PDP–11 computer.

Price: $200
Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

SPLICE: A Mixed-Mode Simulation Program

Operating System: VMS
Keywords: • Electrical • Electronic • Simulation

This mixed-mode simulation program for large-scale integrated circuits performs concurrent electrical and logic simulation, using event-driven selective-trace techniques. The electrical analysis is done using Iterated Timing Analysis (ITA), a new algorithm that performs an accurate electrical waveform analysis with run times up to 50 times faster than SPICE2. The logic analysis features a MOS-oriented state model and a fanout-dependent delay model and handles bidirectional transfer gates in a consistent manner.

SPLICE1.7 is available in RATFOR and FORTRAN. The RATFOR preprocessor is supplied with the program. DECUS number VAX–91.

Note: Release notes are distributed with each tape.

Price: $5 – $225
Contact: DECUS (see Introduction)

SPLICE (Bolted Splice Design)

Operating System: VMS
Keywords: • Civil engineering • Structural engineering

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

SPLICE designs high-strength bolted splices for standard rolled beams and welded-plate girder sections (symmetrical about their major axis).

A version of this product is available for the PDP–11 computer.

Price: $200
Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

SSSLAB

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Civil engineering
• Structural engineering

SSSLAB, developed by Savoy Software Ltd., is a Genesys-based program for the analysis and design of bridge decks, ground floor slabs, or flat slab floor construction. This program uses a finite element mesh comprising triangular plate-bending and beam-bending elements to represent the structure and allows users to generate the mesh for all standard forms of bridge and structural slabs, together with the appropriate loading. The mesh can be plotted complete with element and node numbering to verify data. The Razzaque/Irons triangular element is used.

The flexible program can be stopped and resumed wherever necessary and is particularly useful in the analysis of nonorthogonal or irregular slabs with voids. The results can be selectively produced and include the combining and factoring of load cases, elastic shears, elastic moment fields, support reactions, and nodal displacements. Moments and shears can be further processed to obtain envelopes to be resisted, allowing the engineer to design the slab reinforcement on the basis of a simple slab strip.

Price: $5300 – $8000
Contact: Tony Craddock
(0509) 261519
LAMP SOFTWARE LTD.
Loughborough Technology Centre, Epinal Way
Loughborough, Leicestershire LE11 OQE
United Kingdom

STAAD–III (Structural Analysis and Design)

Operating System: ULTRIX–32, VMS
Keywords: • Civil engineering • Mechanical engineering • Structural engineering

STAAD–III is a comprehensive package performing complete analysis and design for structural engineers. Similar to the STRUDL–II program in both input and capability, yet six to nine times faster, STAAD–III has excelled in different leading time-sharing networks. Other features include:

- Simple English inputs are free-formatted with simple English-type commands.
- Built-in units contain FPS metric and SI units and can be changed during input phases.
- All types of 2-D and 3-D frame/finite element structures, as well as P-delta effect, can also be incorporated in analysis.
- AISC steel tables (1978) contain W S M HP C MC shapes, angles, double angles, double channels, tees, composite sections, beam with cover plates, and pipes and tubes.
- Loads and load combinations consist of joint load, member loads (uniform, linear, and concentrated), temperature load, support displacements, and fixed-end member loads and are accepted in both local and global axes. A combination of any of these loadings, including a combination of combinations, is permitted.
- Checking of the 1978 AISC code and/or selecting the least-weight member section from AISC tables can be performed, based on the analytical results.
- Complete concrete design based on ACI–78 code.
- Structure geometry or deflected shape can be plotted in almost any graphics device.

Price: $6000 – $10,000
Contact: Amrit K. Das
(609) 983–5050
RESEARCH ENGINEERS, INC.
9003-D Greentree Commons
Marlton, NJ 08053

STAGSC–1 (Structural Analysis of General Shells)

Operating System: VMS
Keywords: • Aeronautics/aerospace • Architecture • CAD/CAM • Mechanical engineering

STAGCS–1 is intended for the practical engineering analysis of thin shell structures. Those shell structures may contain separate shell branches or segments connected to one another along their boundaries. STAGSC–1 contains options for static stress analysis (including geometric and material nonlinearities), bifurcation buckling analysis (including nonlinear prestress), vibration analysis (including nonlinear prestress), and transient analysis (linear or with geometric and material nonlinearities). Although intended for the analysis of shells, the capability of STAGSC–1 is extended by the inclusion of axial and torsional springs, as well as general nonlinear beam elements. The STAGSC–1 program is a flexible structural analysis system with many features that enhance computational efficiency and user convenience.

The shell element configurations are triangular and quadrilateral. The triangular element, developed by Clough and Felippa, is used if quadrilateral elements are unsuitable. Quadrilateral elements may be selected from a series based on the combination of two Clough-Felippa triangles. Presently, the "work-horse" element is a flat quadrilateral element developed for STAGSC–1; that element shows excellent economy in most cases of nonlinear and stability analysis. A "transition element" with five nodes (three triangles) is included so that irregular grids may be defined more easily. The definition of the structural configuration may include data from user-written subroutines, providing increased generality and more compact input. Another feature that often makes input preparation easier is that the user is allowed to define substructures separately and to indicate how they are to be connected.

Price: $5000/1-yr lease
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

STI–ANIMATION

Operating System: VMS
Keywords: • Decision support • Graphics • Pre- and postprocessors

STI–ANIMATION allows for experimental or theoretical-mode shapes to be "action" animated. That postprocessing capability is helpful in engineers' assessments of dynamic situations.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $4000
Contact: Richard Carignan
(408) 253–5800
SYNERGISTIC TECHNOLOGY INC.
20065 Stevens Creek Boulevard
Cupertino, CA 95014

STI–MATVAM

Operating System: VMS
Keywords: • Aeronautics/aerospace • Mathematics • Mechanical engineering • Pre- and postprocessors

This matrix-manipulation utility stores each matrix in a disk file in VAMP matrix-file format. That disk storage allows the processing of matrixes of almost any size. MATVAM also translates files generated by NASTRAN to VAMP matrix-file format and produces VAMP matrix files from a VAMP modal-analysis file. That capability permits the synthesis of analytically and experimentally generated information. The program runs through on-line commands that specify the matrix files and the operation. Runstreams of those command lines may be created to perform specific analyses.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $2000
Contact: Richard Carignan
(408) 253–5800
SYNERGISTIC TECHNOLOGY INC.
20065 Stevens Creek Boulevard
Cupertino, CA 95014

STRESS (Structural Engineering Solver)

Operating System: VMS
Keywords: • Civil engineering • Structural engineering

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

STRESS performs linear elastic analysis of statically loaded structures composed of prismatic members. STRESS solves for forces, reactions, and displacements, using the matrix stiffness method. The maximum structure size is 125 members and 250 joints.

A version of this product is available for the PDP–11 computer.

Price: $550 – $850
Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

STRESSGEN

Operating System: VMS
Keywords: • Mathematics • Mechanical engineering

STRESSGEN is an interactive program that is extremely helpful to the user of STRESS–11 and STRUDL. The program permits the user, through question and answer, to generate finite element models of skeletal structures in both two and three dimensions. The program has two levels of generation for nodes and elements. Supported nodes, member properties, releases, and loading cases are also handled by the program. Element lengths are automatically computed for geometry checking purposes and material takeoff. The program contains extensive error-checking routines with clear diagnostic messages. Program output is a file ready to run on either STRESS–11 or STRUDL.

A version of this product is available for the PDP–11 computer.

Price: $300
Contact: Manny Velivasakis
(212) 889–3130
LEV ZETLIN ASSOCIATES, INC.
95 Madison Avenue
New York, NY 10016

Structural Member Analysis Programs

Operating System: VMS
Keywords: • Aeronautics/aerospace • CAD/CAM
• Mechanical engineering • Structural engineering

These general analysis FORTRAN programs for classical structural members with arbitrary mechanical or thermal loading are small, portable, efficient, and easy to use. The members can be of variable cross-section with any in-span supports, foundations, and boundary conditions. Composite cross-sections can be handled. The member can be modeled with either continuous or lumped mass. Static and steady-state displacements and forces, natural frequencies and mode shapes, and buckling loads are calculated. Pre- and postprocessors permitting interactive use of the programs are available. All the programs can be used in batch or interactive form with fixed, free, or prompted input formats.

- Beams: Deflection, slope, bending moment, shear force, buckling loads, frequencies, and mode shapes; can include bending, shear deformation, and rotary inertia effects
- Torsional systems: Angle of twist, twisting moment, and frequencies of shaft system
- Extension systems: Axial displacement, force, and natural frequencies
- Thick cylinder: Radial displacement, radial stress, tangential stress, and frequencies

- Torsion of thin-walled beams: Angles of twist, bimoments, warping shear, internal twisting, moments, unstable loads, and natural frequencies
- Sectional properties: Cross-sectional properties of a bar of any shape
- Stress analysis: The normal and shear stresses on the cross-section of a bar of any cross-sectional shape; the stresses include bending stresses, shear stress due to torsion and warping, shear stresses due to transverse loads, and normal stresses due to warping
- Rotating shafts: For a shaft with unbalance forces, calculation of the displacements, internal forces, and bearing forces; the critical speeds are found for damped or undamped shaft systems
- Circular plate: Deflection, slope, radial moment, shear transverse moment, twisting moments, and frequencies
- Rectangular plate: Static, steady state, stability, and free vibration
- Gridworks: Uniform grillages subjected to uniform, hydrostatic, and concentrated forces
- Disks: Radial displacement, radial force, tangential force, and frequencies

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: W. D. Pilkey
(804) 296–4906
STRUCTURAL MEMBERS USERS GROUP
P.O. Box 3958, University Station
Charlottesville, VA 22903

STRUDL PRO

Operating System: MicroVMS, VMS

Keywords: • Architecture • Civil engineering • Petroleum • Pre- and postprocessors

Memory required: 100KB.

This system, written in ICETRAN/FORTRAN, generates input for McAuto STRUDL. STRUDL PRO is completely menu driven and is designed for the McAuto STRUDL user, with emphasis on generating civil structural models. The system incorporates the conventions, concepts, and syntax associated with STRUDL, such as free-field input, optional labels, 8-character ID generation, access to data tables, change units at any time, multiple structural types in the same model, member eccentricities, and end-joint sizes. Models can be generated, including load cases, support conditions, and member releases.

Price: Available upon request

Contact: Telemarketing
1–800–325–1551
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

Super-Compact

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Graphics • Manufacturing

Super-Compact, the recognized industry standard in microwave CAD, provides the necessary tools for choosing a design topology and active elements, synthesizing amplifier matching circuits, and optimizing complete circuits with up to four external ports. Circuit elements include lumped, microstrip and stripline, filter, thin film, coupler, and active devices. The circuit-analysis portion of Super-Compact features tabular and interactive CRT graphics. Mapping and variable-element analysis is also featured. Optimization features random and/or gradient methods, with performance criteria that can include combinations of parameters with noise, phase, and group delay characteristics. Circuits can be modified without exiting from the program. Transistor and dielectric data banks provide for selection on a conversational basis. A Monte Carlo analysis feature can predict manufactured-unit performance spreads. Super-Compact can be used with its companion program, Autoart, to generate masks for microwave integrated circuits (MICs).

Price: $45,000 – $60,000
Contact: Henry Wong
(415) 966–8440
COMPACT SOFTWARE, INC.
1131 San Antonio Road
Palo Alto, CA 94303

SUPER*SCEPTRE

Operating System: VMS
Keywords: • CAD/CAM • Electrical • Electronic • Mechanical engineering

This program represents a significant advance beyond the popular SCEPTRE program. The original SCEPTRE is a sophisticated, automatic analysis program for determining initial conditions and transient and steady-state responses of linear, nonlinear, or digital networks. A free-format, easy-to-learn, engineer-oriented language is used. SCEPTRE provides complete flexibility in modeling. A defined parameter mode allows SCEPTRE to directly solve state equations, which might be written to describe any system. The program has added an implicit integration routine that allows dramatically faster solutions of stiff systems. The system can perform AC (frequency domain) analysis and four new DC options, including sensitivity, optimization, worst-case, and Monte Carlo.

The SUPER preprocessor can analyze extensive mechanical systems, digital logic, S-domain transfer functions, guidance and control systems, and interdisciplinary problems. The program can automatically react with any FORTRAN subprogram. The most common nonlinear blocks, such as hysteresis, dead zone, and others, are built in for user convenience. Extensive documentation is available. The

SUPER*SCEPTRE program includes a solid-state model library containing S*S-compatible computer models for 200 devices. Included are bipolars, MOSFETS, JFETS, PWRFETS, diodes, zeners, SCRs and new macro models for FET, and bipolar input IC OPAMPS.

Although S*S is a batch program, this version can be accessed by a graphics terminal and is capable of the full spectrum of output displays, including multiple plots, enlargements, and more.

Price: $24,900

Contact: Dr. James C. Bowers
(813) 932–9853
AB ASSOCIATES
P.O. Box 82215
Tampa, FL 33682

SUPERDRAW

Operating System: VMS

Keywords: • Graphics • Mapping • Simulation

SUPERDRAW is a comprehensive 3-dimensional interactive model-displaying software system that reads data files from most finite element analysis programs — such as STRESS, STRUDL, TPS–10, and NASTRAN — and creates a model file. That model can then be displayed on a CRT, such as a VT100 with selenar board modifications, or an equivalent Tektronix CRT. The model can be rotated, scaled up or down, and segmented by the cross-hair cursor. Nodes and elements can be numbered. Deflected shape structures can also be displayed. The displayed model can then be sent to a plotter or a printer/plotter.

SUPERDRAW is extremely helpful to engineers in error checking and verifying finite element models.

The commands are in English, and extensive help features are available to the user at all levels.

A version of this product is available for the PDP–11 computer.

Price: $1000

Contact: Manny Velivasakis
(212) 889–3130
LEV ZETLIN ASSOCIATES, INC.
95 Madison Avenue
New York, NY 10016

SUPERSAP

Operating System: VMS

Keywords: • CAD/CAM • Civil engineering • Graphics • Structural engineering

This comprehensive finite element stress and dynamic analysis system is for structural and mechanical engineers. SUPERSAP incorporates all parts of the finite element chain of events, from modeling and preprocessing through analysis and postprocessing. SUPERSAP is the only system needed for the finite element process and is easy to use. Thus, the power of finite element analysis is now available to a much wider range of engineers.

SUPERSAP is fully integrated with SUPERDRAW, Algor's computer-aided design and drafting system. SUPERSAP uses graphics and interactive graphics to a high degree to simplify modeling and analysis. Virtually any structure or mechanical part can be modeled and analyzed with SUPERSAP.

Monthly rental is available.

Price: $5000 – $13,000
Contact: Sales Manager
(412) 661–2100
ALGOR INTERACTIVE SYSTEMS, INC.
Essex House, Suite L1, Essex Square
Pittsburgh, PA 15206

Survey

Operating System: VMS
Keywords: • Data collection • Medical • Nuclear • Scientific
Distribution media: magnetic tape, RL02.

This program provides a convenient method for recording and archiving radiological survey results. The data for each survey includes date and time, dose rates, survey instrument identification, location (building, elevation, room, position), air sample analysis results, surveyor, as well as a section for survey request information.

The menu-driven format allows easy file maintenance and report generation. The reports that are available include listings by location, type of survey, survey instrument, and activity level. File protection and backup are ensured by "1-button" archiving and operator password protection.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Robert Loesch
(203) 238–2351 ext. 352
CANBERRA INDUSTRIES, INC.
One State Street
Meriden, CT 06450

SVD (Singular-Value Decomposition)

Operating System: UNIX* (Berkeley, System III, System V), VMS
Keywords: • Mathematics • Research • Simulation • Statistics

SVD determines the singular-value decomposition of a real m by n matrix A. That includes the inverse, determinant and rank of A, if $m = n$, or the pseudoinverse and rank of A, if $m \neq n$.

This FORTRAN program comes either as a subroutine, for calling from a main program, or as a user-friendly stand-alone program, for interactive terminal use. The latter program uses free-format FORTRAN–77–type extensions for interactive I/O. Telephone demos are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $250 – $500
Contact: Dr. Joseph J. DiStefano III, Professor
(213) 825–7482 or 825–4033
UNIVERSITY OF CALIFORNIA, LOS ANGELES
School of Engineering and Applied Science
Biocybernetics Laboratory, 4731K Boelter Hall
Los Angeles, CA 90024

SYNOPSYS (Synthesis of Optical Systems)

Operating System: VMS
Keywords: • Graphics • Mathematics • Report writer • Scientific

This easy-to-learn state-of-the-art computer program designs and evaluates complex optical systems containing lenses, mirrors, and prisms. SYNOPSYS serves modern optical designers and engineers by providing the best of currently available technology.

The program is cost effective. The optimization program uses the exclusive PSD algorithm, which gives faster convergence than most DLS programs — in some cases an order of magnitude faster.

This flexible system allows the user to create a custom merit function giving powerful control over specific details of a lens at the lowest possible cost. The multiconfiguration feature will design lenses with moving components, common modules, and either optical or mechanically compensated zooms.

SYNOPSYS contains the features a designer is likely to need, including image analysis, tolerancing, comprehensive utilities, and an extensive array of report-ready graphics.

Price: $1200/mo
Contact: Donald C. Dilworth
(617) 488–3099
OPTICAL SYSTEMS DESIGN, INC.
3 Johnson Avenue
Medford, MA 02155

TAPEIA

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Manufacturing • Mechanical engineering

Memory required: 64K minimum.

This program reads a command file produced by the CODE program and resolves the locations of the circle commands of the size selected by the user. The drill/circle selection has two modes. The default mode, which is permanently set into the program, can be selected by the user prior to compiling. The interactive dialog asks the user how many circle sizes to search for and the diameter of those circles.

The output is a punched paper tape with a predetermined format. Multiple formats require multiple versions of this program. The tapes produced are in the standard EIA RS422 format. If an ASCII or an RS358 format is desired, the sister program TAPEAS is needed.

The TAPEIA program produces N/C drill tapes for printed circuit boards and for numerical control drills in a machine-shop environment, such as for tube sheet or bolt circles.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

TELEVNT/TELSET/TELDAX: Telemetry Acquisition and Reduction

Operating System: VMS
Keywords: • Aeronautics/aerospace • Data collection • Device drivers/handlers • Real time

This software consists of a device driver for a high-speed data acquisition, as a minimum, to a complete user-interactive system, which includes products that set up and control telemetry equipment and automatically store data on disk or digital tape.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $60,000
Contact: Michael P. Hutchinson, Senior Systems Engineer
(813) 371–0811
FAIRCHILD WESTON
P.O. Box 3041
Sarasota, FL 33578

Time-Domain Analysis

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Signal processing

This optional feature of Super-Compact analyzes linear, small-signal circuit design and time-domain responses. When used with Super-Compact, Time-Domain allows engineers to perform analyses in frequency and time domains.

Price: $4000 – $6000
Contact: Henry Wong
(415) 966–8440
COMPACT SOFTWARE, INC.
1131 San Antonio Road
Palo Alto, CA 94303

TORLOG

Operating System: VMS
Keywords: • CAD/CAM • Electronic • Simulation

Distribution medium: magnetic tape.

This 3-state logic simulation package supports electronic logic design. The program is written in FORTRAN IV, and the source code is licensed to the buyer. TORLOG supports up to one million time steps, can be purchased "as is" or in a Torric-supported configuration, and is distributed with a user's manual.

Price: $6000 – $22,000
Contact: Frank Weiler
(602) 951–2900
TORRIC CORP.
7950 E. Redfield Road
Scottsdale, AZ 85260

TPS–10 Finite Element System

Operating System: VMS
Keywords: • Mathematics • Mechanical engineering

This general-purpose finite element analysis program features linear statics, material nonlinearities and large displacements, dynamic response, heat transfer, and acoustics. Substructure analysis may be performed with structural, heat transfer, and acoustics problems.

The finite element library for TPS–10 includes beams (with optional offsets); triangular and quadrilateral membranes, plates, and axisymmetric rings (3 or 4 nodes); isoparametric, triangular and quadrilateral membranes, plates, and axisymmetric rings (6 or 8 nodes); solids — tetrahedron, wedge, and brick (4, 6, and 8 nodes); and isoparametric solids — tetrahedron, wedge, and brick (10, 15, and 20 nodes).

Loading in TPS–10 may consist of concentrated or distributed forces, pressures, temperatures, accelerations, and centrifugal loads. Factor-and-add combinations of load cases may be used to obtain design loads. In the case of axisymmetric models, nonsymmetric loading may also be applied. Many boundary condition specifications are available, including gaps and sliding friction.

Input to TPS–10 may be prepared in free or fixed format. Automated data stringing and mesh generation are included to reduce manpower requirements for input. The model data may be checked graphically, and output may also be plotted. Output plots include the deformed structure and contours of stress, displacement, or temperature.

A version of this product is available for the PDP–11 computer.

Price: $12,000 – $20,000
Contact: Manny Velivasakis
(212) 889–3130
LEV ZETLIN ASSOCIATES, INC.
95 Madison Avenue
New York, NY 10016

TR–20 Flood Routing

Operating System: VMS
Keywords: • Civil engineering • Data collection • Flow analysis • Geoscience

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

The TR–20 system flood routes any frequency storm through user-specified hydrologic networks. Detailed hydrographs and summary output reports can be requested. The software computes surface runoff resulting from any synthetic or natural rainstorm, takes into account conditions having a bearing on runoff, and routes the flow through stream channels and reservoirs. The system combines the routed hydrograph with those of other tributaries and prints the peak discharges, their time of occurrence, and the water-surface elevation for each tributary at any cross section or structure. The program provides for the continuous analyses of nine storms over a watershed under present conditions and with combinations of land treatment floodwater — retarding structures and channel improvement. A maximum of 120 reaches and 60 structures can be analyzed in one continuous run.

Price: $600
Contact: Robert E. Branch
(804) 622–1755 or (800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 West Plume Street
Norfolk, VA 23510

TRASYS II (Thermal Radiation Analyzer System)

Operating System: VMS
Keywords: • Energy • Environmental
• Pre- and postprocessors • Scientific

TRASYS II can solve the radiation-related aspects of thermal analysis problems. When TRASYS II is used with a generalized thermal analysis program, such as the Systems Improved Numerical Differencing Analyzer (SINDA) program, any thermal problem that can be expressed in terms of a lumped parameter R–C thermal network can be solved. TRASYS II provides for the calculation of internode radiation interchange data and for the calculation of incident and absorbed heat rate data originating from environmental radiant heat sources.

The TRASYS II system consists of two major components: the preprocessor and the processor library. TRASYS II allows users to write their own executive, or driver, programs that organize and direct the library routines toward solving each problem. The preprocessor first reads and converts the user's geometry input data into the form used by the processor library routines. Next, the preprocessor accepts the user's driving logic, written in the TRASYS II–modified FORTRAN language, which directs the user-provided and processor library routines in the solution of the problem. The processor library consists of FORTRAN routines that perform the functions the user commonly needs to solve thermal radiation problems. In many cases, the user has a choice of solution techniques to perform the same function.

TRASYS II can be used for problems with as many as 1000 nodes and time-variable problem geometry. The edit capability permits easy modification of complex thermal radiation problem models. TRASYS II output consists of two basic types of data: internode radiation interchange data and incident and absorbed heat rate data.

Price: $4100
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

TRHEAT

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Mechanical engineering • Nuclear

This 1-dimensional heat-transfer program calculates the pipe-wall temperature gradients and gross discontinuity stresses when the contained fluid experiences a temperature transient. The fluid temperature transient can be described as a step change from an initial to a final temperature, as a ramp change terminating in a constant temperature plateau, or as a series of time versus temperature points. TRHEAT results include the equivalent linear and nonlinear pipe-wall temperature gradients and the discontinuity temperature differences required for the calculation of piping stresses. Those results are in accordance with the requirements for Class 1 piping specified in Section III of the ASME Boiler and Pressure Vessel Code. TRHEAT uses a closed-form solution to the basic heat-transfer equation. Film heat-transfer coefficients, pipe/fluid material, and thermal properties are internally stored for user convenience.

Price: $800 – $6000
Contact: John R. Nardello
(408) 866–4510
QUADREX CORP.
1700 Dell Avenue
Campbell, CA 95008

TWODEPEP

Operating System: VMS
Keywords: • Mathematics • Research • Scientific • Structural engineering

Distribution medium: magnetic tape.

This easy-to-use finite-element program, written in FORTRAN, solves time-dependent, steady-state, and eigenvalue partial differential equations in general 2-dimensional regions. TWODEPEP has general applications in problems involving elasticity, diffusion, heat conduction, potential energy, Schrodinger equations, fluid mechanics, and elastic resonance, plates and shells, and cracks. TWODEPEP offers a preprocessor that allows you to define the problem in a simple, straightforward representation; automatic triangulation and grading of the triangular mesh; out-of-core storage capability for solving large problems; quadratic, cubic, quartic, and isoparametric elements; and a portable graphics program.

Educational discounts are available.

Price: $2000 – $3000
Contact: Sales Division
(713) 772–1927
IMSL, INC.
7500 Bellaire Boulevard, NBC Building
Houston, TX 77036

UCSMP: A General Dynamic Modeling and Simulation Program

Operating System: VMS
Keywords: • Simulation

Distribution medium: magnetic tape.

This program, written in FORTRAN, allows the user to model problems quickly in mathematical terms and to obtain solutions efficiently and economically. General areas of application include heat transfer, economics, chemistry, medicine, sales forecasting, liquid flow, and so forth. Discrete events and hybrid systems can also be modeled. FORTRAN statements and programmed functions can be used without the need for ordering the input statements. A preprocessor scans the input and orders the data for proper execution. Diagnostic messages for syntax errors, ambiguities, undefined parameters, and so forth are provided with other useful debugging information. Output variables are plotted as they are calculated. The user can see solution progress, avoiding unnecessary computation time due to improper input data or parameters.

A double-precision version of this program is available on the VAX machines only. Single precision is available on both VAX and PDP–11 machines. Floating-point hardware is required for those programs.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Carol Kunz
(505) 266–9622
BERNE ELECTRONICS, INC.
120 Dartmouth SE
Albuquerque, NM 87106

UDAP (Urban Drainage Analysis Package)

Operating System: VMS
Keywords: • Civil engineering • Flow analysis

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

UDAP performs hydraulic analysis of classical urban storm-water pipe systems. Input data consists of size, shape, material, inverts, time of concentration, inlet area, runoff coefficients, and so forth. The output consists of relevant input data plus flow, velocity, and hydraulic grade line from each pipe in the system. A system with up to 1000 pipes can be analyzed.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

VAMP (Vibration Analysis and Measurement Processor)

Operating System: VMS
Keywords: • Aeronautics/aerospace • Mechanical engineering • Signal processing • Structural engineering

Distribution medium: 9-track 1600 bpi magnetic tape.

This stand-alone, general-purpose time-series and spectrum-analysis program provides for signal analysis and structural-dynamic engineering. The modules of this system include vibration analysis, model analysis, animation, matrix operations (MATVAM), and nth octave analysis. Additional VAMP options include signal generation and data acquisition on systems that have compatible DAC and ADC equipment. This modular system is compatible with most graphics terminals and includes full graphic display and data management.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $20,000
Contact: R. D. Carignan
(408) 253–5800
SYNERGISTIC TECHNOLOGY INC.
20065 Stevens Creek Boulevard
Cupertino, CA 94087

VANGO

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Graphics • Mapping

Distribution medium: magnetic tape.

VANGO is an easy-to-use interactive computer-aided design and drafting system for surveying, mapping, land development, civil engineering, and geographically based information. The system provides a tool for calculation, data management, and automated drafting, beginning with the boundary survey and proceeding through each phase of the project to final drawings.

VANGO performs the tedious, error-prone calculations involved in land planning. During the design process, computer-plotted drawings can be generated to show the current project status. Drafting on a high-speed plotter ensures clearer, more accurate drawings and reduces the time required to produce them. Changes are easily accommodated, since new drawings may be plotted on demand. The data created is preserved and fully utilized in all successive steps and is maintained on line.

The VANGO Digital Terrain Model (DTM) module, fully integrated with VANGO, is a highly advanced earthwork computational system. Volumes are computer based on a cell that is typically a ⅛″-square at plan scale. Elevation interpolation for determining the cell elevations from the random data is performed 2-dimensionally rather than the more typical linear interpolation. Thus, accuracy of results does not depend on defining special features.

The VANGO DTM Highway module, fully integrated with the DTM Earthwork module, permits passing cross-sectional templates, each following its own alignment and profile, through the Digital Terrain Model. The templates and the side slopes may change at any station and can represent a highway, transportation corridor, channel, or rail line. Since existing terrain cross sections along the proposed route are not required, this module is ideal for studies requiring analysis of several alternate routes or several iterations of a chosen route. Profiles, daylight lines (catch points), cross sections, mass, and haul diagrams are quickly generated for each iteration of alignment and profile, enabling an optimum route to be established.

A version of this product is available for the PDP–11 computer.

Price: $12,500 – $80,000

Contact: Charles Oliver
(714) 660–8855
VLSYSTEMS, INC.
2691 Richter, Suite 118
Irvine, CA 92714

VAX Analyzer Communications Package

Operating System: VMS

Keywords: • Data conversion • Instrumentation • Networking

Distribution media: 1600 bpi magnetic tape, RX01, RX02, RX50, TU58 DECtape II cartridge.

The VAX Analyzer Communications Package allows data transfer to/from ND multichannel analyzers by VAX users. The package uses RS232C-type interfaces (DMF32 or DZ–11). Data protocol is single-drop asynchronous DDCMP. Standard VMS drivers are used.

Price: $1500
Contact: Bob Schlossmann, Product Support Engineer
(312) 884–3627
NUCLEAR DATA, INC.
Golf and Meacham Roads
Schaumburg, IL 60196

VLOAD — Curved Girder Analysis by the VLOAD Method

Operating System: MicroVMS, VMS
Keywords: • Structural engineering

This quick, easy-to-use program automates the approximate procedure for analyzing horizontally curved open-framed highway bridges. When a planar-grid analysis is required, VLOAD can be used for the preliminary analysis, reducing costly runs. The program requires a minimal amount of input and provides the following at the tenth points in each span: dead-load moments and shears; superimposed dead-load moments and shears; maximum/minimum live load bending and shear envelopes; reactions, including uplift at the end supports; and DL, SDL, and LL deflections.

Price: $950
Contact: Robert Scibelli
(212) 532–6363
CDS SOFTWARE, INC.
120 East 38th Street
New York, NY 10016

WATDIS (Water Distribution System Analysis)

Operating System: VMS
Keywords: • Civil engineering • Flow analysis

Distribution media: 9-track 800/1600 bpi magnetic tape, RL02, TU58 DECtape II cartridge.

WATDIS analyzes water distribution systems. Any type of pipe system can be analyzed. Pressure or flow requirements can be specified, and any number of storage tanks, pumps, valves, meters, and fittings can be input. Pumps can be specified by useful power or by inputting head flow data from operating curves. Check valves may be used also. Flow units of CRS, GPM, MGD, or SI are acceptable. Output includes pressures, elevations, and grade lines at all junctions; head losses in lines and at all valves; and pump heads, flow rates, and flow velocities. WATDIS is limited to 175 pipes for the PDP–11 and 600 for the VAX.

WATDIS is the PDP–11 and VAX–11 conversion of the University of Kentucky water distribution analysis software.

A version of this product is available for the PDP–11 computer.

Price: $1200 – $1400

Contact: Robert E. Branch, P.E.
(800) 368–4203
TECHNICAL INFORMATION SYSTEMS, INC.
116 W. Plume Street
Norfolk, VA 23510

WOMBAT: A Netlist Comparison Program

Operating System: VMS

Keywords: • Electronic • Quality control • Simulation

This program compares two netlists. Typically, one netlist is obtained from an extracted layout and one from a schematic diagram, but they may also come from other sources. The output from the program is a list of cells — transistors, gates, or blocks — that the program could not match, along with a list of terminals or nets that the program could correlate. The program differs from other netlist comparison programs in that it does not require labeling of any nets in either circuit to get started.

Most integrated circuit layouts are hand checked to determine their correctness. The WOMBAT program overcomes this time-consuming procedure.

WOMBAT runs on a VAX under Berkeley UNIX* and VMS. Running under UNIX,* WOMBAT can compare two 1200-element circuits in less than 30 cpu seconds. WOMBAT has been used on circuits containing more than 10K elements. DECUS number VAX–92.

Note: Release notes are distributed with each tape.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $5 – $225

Contact: DECUS (see Introduction)

Wood Beam Check

Operating System: VMS

Keywords: • Architecture • Civil engineering • Government • Materials handling

Distribution media: 9-track 1600 bpi magnetic tape, *RX01, RX50.*

This analysis program verifies the design techniques of wood structures, allows superimposition of multiple vertical forces — point loads, uniform loads, and increasing/decreasing loads — on wood structures for load analysis, verifies a designed structure and reports compliance with the uniform-building code, and transfers resultant forces into a

uniform distributed load for transfer to the next phase of the analysis. Printed reports are available at each solution point within the program.

A version of this product is available for the PDP–11 computer.

Price: $2100 – $10,000

Contact: Michael D. Dahmer, P.E.
(208) 324–3187
SYSTEMS ASSOCIATES, INC.
573 Glacier
Jerome, ID 83338

Facilities Management

Cary Wolinsky/Stock, Boston

ABC/MM (Maintenance Management System)

Operating System: MicroVMS, VMS
Keywords: • Cost accounting • Maintenance • Payroll • Property management

This package automates most of the clerical and planning work of maintenance in manufacturing, processing, utility and industrial plants, institutions, hospitals, schools, and maintenance and repair businesses. ABC/MM consists of a data base and eight modules:

- Maintenance Labor processes daily time cards to report job progress, time, and cost for maintenance accounting and provides data needed for payroll.
- Work-Order Backlog provides a systematic review of job priorities and work-load backlog, scheduling weekly work according to each labor craft availability.
- Planning Aids computes net capacity, backlog by craft, and time-slot averages on a moving-averages basis.
- Work-Order Activity provides a daily activity report, weekly performance report, and a weekly and monthly work-order review.
- Equipment History Record provides data and a spare-parts list for each piece of equipment and is updated with maintenance history.
- The Stores Catalog shows the availability and cost of maintenance material and parts. Material requisitions for maintenance work are costed and charged against the work order and deducted from inventory.
- Preventive Maintenance issues work orders weekly, reports overdue inspections and follow-up, and controls generated repair work orders.

A version of this product is available for the PDP–11 computer.

Price: $11,000 – $59,000
Contact: Dr. Vernon W. Ruskin, President
(604) 682–3808
ABC MANAGEMENT SYSTEMS INC.
805 Dupont Street, Suite 3
Bellingham, WA 98225

Access Control

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Security

The system, designed as a high-volume, high-capacity, fast-response access control system, supports multiple local or remote control consoles with optional printers and also provides for 1000 individual doors and up to 56,000 badges. The system has three levels of validation and two sets of access parameters for each badge and accepts input from

numeric touch pads in conjunction with badge reader input. The system processes lost badges, allows for self-expiring badges, and includes guard door open, automatic lock and unlock, door ajar, day of week override, bulk card input, and many management reports.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $80,000
Contact: Laurel McDaniel
(312) 332–3242
NEAL NELSON & ASSOCIATES
185 N. Wabash, Suite 1908
Chicago, IL 60601

CHAMPS (Computerized History and Maintenance Planning System)

Operating System: VMS
Keywords: • Inventory • Maintenance • Management • Operations

This generalized system schedules, tracks, and permanently records the maintenance and operational tasks of complex industrial facilities. CHAMPS is user defined, allowing the user to customize data contents, transactions, and reporting formats to accommodate existing administrative methods without programmer assistance. Key functional modules perform repetitive tasking (PM), corrective action work-order control, personnel management, inventory and spare parts management, and report writing.

Price: $50,000 – $300,000
Contact: Mike Rooks
(904) 795–2362
SYSTEMS COORDINATION INC.
P.O. Box 2600
Crystal River, FL 32629

CMMS (Comprehensive Maintenance Management System)

Operating System: MicroVMS, VMS
Keywords: • Environmental • Maintenance • Materials handling • Process control

This stand-alone system can be interfaced to run with any EMCS system and allows easy addition, deletion, modification, display, and summary operations. The system keeps track of work requests that are outstanding, forecasts what is coming up in whatever time period the operator requests, and stores completed work orders in a file for historical analysis.

A version of this product is available for the PDP–11 computer.

Price: $4500 – $6500
Contact: Carl Luhman
(619) 270–4552
CENTAURUS SOFTWARE, INC.
4425 Cass Street, Suite A
San Diego, CA 92109

Fixed-Asset Control

Operating System: VMS
Keywords: • Fixed assets • Inventory • Property management

This system, written in BASIC–PLUS, uses bar-coded labels and a portable bar-code reader. The labels will withstand grease, oil, and heat. Biomedical clinics are using the labels on equipment subject to the sterilization process.

Inventory of the fixed asset is taken using the portable reader. The information is transmitted to the computer directly or through phone lines.

An exception report of moved or missing equipment is produced that saves inventory-taking time by 78%, eliminates long printouts, and eliminates expensive key entry.

Users include companies with a large number of desks and typewriters, manufacturers, hospitals, and colleges and universities.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $11,000
Contact: Mel J. Endelman
(604) 926–7222
BAR CODE APPLICATIONS INC.
1609 Broadway, Suite A
Bellingham, WA 98225

FMS (Facility Management System)

Operating System: VMS
Keywords: • Inventory • Maintenance • Project management • Property management

The comprehensive FMS package, written in Level II COBOL, covers maintenance management functions. FMS is menu driven, user friendly, interactive, and designed for mainframes, minis, and microcomputers. FMS consists of seven modules that may be purchased individually:

- EMS is an equipment management information and work order scheduling and control system that supports PM, repairs, and predictive and condition-based maintenance. EMS accepts equipment inventories, maintenance histories, and reports.

- WMS is a building and grounds work order scheduling and control system (space utilization). WMS accommodates descriptive data, maintenance histories, and reports.
- INV is a material/parts scheduling, control, and reporting system emphasizing inventory, reorders, part status, and transaction history (issues, receipts, returns, and so on). INV accommodates stocked and nonstocked items and permits interface to an existing purchasing system.
- TAS is an employee time card and labor costing program that provides labor and charges to other programs. TAS permits an interface to the existing payroll system.
- PMS is a project management system consisting of a work breakdown structure, task dependencies, project estimating and scheduling, cost control, and reporting functions.
- B&A is a budget and accounting system providing managers with information about requested, authorized, committed, and expended funds.
- SWORD is a powerful, swift, on-line report developer that allows the user to design reports for any of the FMS data bases.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $180,000

Contact: Richard A. Sherman
(703) 931–8090
PLANNED MAINTENANCE SYSTEMS, INC.
5707 Seminary Road
Falls Church, VA 22041

FUSS (Facilities Use Scheduling System)

Operating System: VMS

Keywords: • Billing • Property management • Scheduling

This highly flexible integrated system provides quick and accurate scheduling of space and provides billing for the use of space. FUSS accepts data input through user-friendly, formatted screens that perform error checking.

FUSS simplifies repetitive date patterns; for example, one request may book all Tuesdays, all weekdays, or other days. The facility system may be automatically blocked out for up to 30 days. The system also locates available time blocks for a room.

Two statistical reports — by customer or by space — detail the usage in the past month(s). A printed permit details use, conditions of use, and charges for use authorized by each permit. Automatic billing for space usage varies by customer, date, time, and type of space. Bills may be printed on any schedule; three formats are available for printed schedules. Bill formats are customized to the user's preprinted form or for a commercially available form.

The base price includes installation, user training, and a 90-day service contract.

Price: $5000 – $10,000

Contact: John H. Bland
(907) 274–5245/276–6943
DARKSTAR
1101 Cordova Street, Suite 436
Anchorage, AK 99501

IMMS (Interactive Maintenance Management System)

Operating System: VMS

Keywords: • Bill of materials • Inventory • Maintenance • Personnel

IMMS, a maintenance management package, allows the accessing and processing of information to manage personnel and their work and to control the cost of materials, personnel, and contracts. The modular IMMS system emphasizes interactive processing while incorporating interfaces to financial packages as well. The major modules are:

- Equipment Information: incorporates a natural and logical numbering scheme; component tracking of operating usage, work order, and movement history; bill of materials, including parts list by component; and detailed specifications
- Preventive Maintenance Tasks: triggered by time schedule or usage (such as operating hours), standard task assigned to equipment with independent scheduling triggers, validated parts and tools list, hours by craft for resource balancing, detailed tradespeople instructions, work order generation based on cut-off due date, and interactive spreadsheet balancing by estimated labor hours
- Work Order Management: prioritized backlog releasing based on resource and parts availability; automatic and on-demand parts reservations for critical work orders; distribution of labor, material, and contract costs; and reporting of work orders by status (such as waiting parts) and progress costs
- Equipment/Work Order Histories: variance analysis of estimated versus actual hours by trade and costs by category
- Spare Parts Inventory Management: part-detail data sheet; receipts and issues/returns; catalogs; reorder reports; audit trail/transaction histories; reconciliations; and cross-references to component usage

User interface features include formatted screens with multiple levels of help, a sophisticated lock manager to allow protected concurrent access, and direct or generic list review of information organized in a hierarchical data base.

Price: Available upon request
Contact: Dilip B. Kotak, Senior Project Manager
(604) 688–7751
DATAP SYSTEMS
1190 Hornby Street, Suite 600
Vancouver, British Columbia V6Z 2K5
Canada

MAINSY–IMPRS Preventive Maintenance System

Operating System: VMS
Keywords: • Cost accounting • Maintenance • Scheduling

MAINSY–IMPRS schedules preventive maintenance and maintains complete historical summary information. Any type of maintenance schedule may be set up — on a daily, weekly, monthly, quarterly, semi-annual, or annual basis. Schedules may be selected for printing by frequency, by cutoff date, or by PM number. Summary schedules or the full schedule (with text) may be printed.

The system has complete data verification and on-line validation capabilities. Job costing information is applied through on-line timecard entry. A full year's PM historical information is kept on line. Instant access is available to all master files for selective reporting.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

Maintenance Management System

Operating System: VMS
Keywords: • Cost accounting • Decision support • Maintenance • Property management

This comprehensive application software package helps manage and control preventive (PM) and repair maintenance of plants and equipment. The system handles manpower planning, work order scheduling and tracking, and cost accounting more quickly and effectively and with less paperwork than manual methods do. Individual users can customize the system with system codes that define maintenance locations or zones, crafts or shops, and so on.

Complete, accurate, and readable PM work orders are printed automatically before a calendar period from task descriptions and schedules. Unscheduled work orders are entered manually. Uncompleted work appears on a backlog report until the work order is completed or canceled. The system guards against work-order pileup.

A permanent history of equipment repairs and inspections aid in making repair or replace decisions. That history also provides documentation for safety, legal, or insurance compliance.

The system provides a means of scheduling and reporting equipment performance measurements. Parameters such as operating temperature, motor current, and filter pressure readings are compared with established normals to indicate the need for adjustment, repair, or replacement of equipment.

An equipment cross-reference list allows the user's inventory of capital equipment to be organized by equipment type, manufacturer, or location and assists in developing a standard routine preventive maintenance schedule for similar types of equipment.

A labor summary report informs management of the relative efficiency of each maintenance craft or shop by reporting both the type and the amount of work done by each craft. The report compares both the number of work orders and labor hours scheduled with the actual number of work orders and labor-completed hours expended.

The cost center report enables management to allocate or charge back the cost of maintenance labor and materials to specific departments or projects. The report also documents manpower requirements.

Work logs are automatically produced to schedule and control routine equipment maintenance procedures. Routine work is expedited, since the logs group similar tasks to be performed on equipment within a specific geographic zone or location.

The system consists of approximately 70 application program modules written in 1974 ANSI Standard COBOL. A COBOL run-time system is provided for RT–11 systems. A COBOL compiler is required for RSTS, RSX–11M, and VMS systems.

A version of this product is available for the PDP–11 computer.

Price: $15,000
Contact: Tom Coleman, Systems Manager
(616) 676–2666
FAIRBROTHER CORP.
6090 E. Fulton, P.O. Box 211
Ada, MI 49301

MCS (Maintenance Control System)

Operating System: VMS
Keywords: • Data base management • Inventory • Maintenance • Purchasing

This system improves productivity and reduces costs in plant and facilities maintenance environments. MCS is for corporations with maintenance staffs of more than 50 people and significant maintenance expenditures in single or multiple plant locations.

MCS consists of the following integrated modules:

- Routine Maintenance Module provides on-line work order generation, planning, approval, scheduling, equipment history updating, performance analysis, and summary reporting.
- PM Module schedules, tracks, and reports on preventive maintenance activities, based on preestablished intervals, such as calendar time, machine hours, or user's discretion plans.
- Stores/Inventory Module provides automated parts tracking (from receipt through use), inquiries, adjustments, requisitions, and report/analysis.
- Purchasing Module, for resources such as spare parts, materials, and contract labor, provides requisition processing, procurement, RFQ preparation, P.O. processing, performance analysis, and summary reporting.

MCS supports from 5 to 100 users and is on line, interactive, and friendly to all users. MCS is programmed in INFO — a relational data base management system and fourth-generation computer language developed by Henco Software.

Price: $95,000

Contact: MCS Marketing
(612) 941–0770
KEITH–STEVENS INC.
9531 W. 78th Street, Suite 300
Eden Prairie, MN 55344

PMIS (Plant Management Information System)

Operating System: VMS

Keywords: • Accounting • Maintenance • Property management • Purchasing

Distribution media: magnetic tape, RL02.

This adaptable interactive computer system provides operating and management information to effectively manage, maintain, and operate an industrial plant consisting of repairable assets.

PMIS provides:

- Plant asset and equipment management incorporating a multilevel bill of material, parts lists, and where-used lists; performance monitoring; unlimited technical description; and summary and detailed technical maintenance history.
- Work planning, forecasting and scheduling of trade, materials and plant to planned repair, preventive maintenance, and project and miscellaneous work.
- Materials management, including requisitions, purchases, receipts, issues and materials reservation for spare parts stores, and general inventory or work order stores. Free issue, tools, and employee stores are accommodated.
- Automatic cost distribution and reporting by account, asset, equipment and work order of maintenance labor, stores materials, and purchased goods and labor.

PMIS is available as a turnkey system consisting of operating system software, application software, installation, training and documentation, ongoing system support, and computer hardware. PMIS is available in BASIC–PLUS–2 for the PDP–11 and in VAX–11 BASIC.

A license to run PMIS software may also be purchased. That option includes application software, installation, training, and documentation.

A version of this product is available for the PDP–11 computer.

Price: $64,000 – $120,000
Contact: Donald J. Kawaja
(416) 596–6944
G. K. FLEMING AND ASSOCIATES LTD.
156 Front Street West
Toronto, Ontario M5J 2L6
Canada

PMST (Preventive Maintenance Scheduling and Tracking System)

Operating System: VMS
Keywords: • Maintenance • Scheduling
Distribution media: magnetic tape, RL01, RL02, RX01, RX02.

This system tool for ensuring that preventive maintenance is scheduled for many pieces of equipment also provides status reports of scheduled preventive maintenance and documentation of completed preventive maintenance. The system also supports many other useful functions. The companion Repair History Tracking software provides for printing repair work orders and listing completed and outstanding work orders.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $7000
Contact: Ralph M. Flanders, President
(615) 966–6832
CUSTOM COMPUTER SOFTWARE, INC.
1108 Woodshire Drive
Knoxville, TN 37922

SABA (Stacking and Blocking Algorithm)

Operating System: VMS
Keywords: • Architecture • Graphics • Property management
Distribution medium: 1600 bpi magnetic tape.

This system provides space planners with powerful, easy-to-use tools for producing locational stacking plans and schematic block floor plan layouts for buildings. The SABA systems reliably produce high-quality solutions to both large and small problems, at relatively moderate cost for data preparation and computer processing.

Input to the Stacking Plan Program is a list of spaces, workstations, or departments to be located in a building or buildings, together with their required areas, their adjacency/communication requirements, and a description of the floors into which they are to be placed. The system's objective is to assign activities (spaces, workstations, departments, and so on) to zones (buildings, floors, and so on) so that highly interrelated activities are placed onto the same or adjacent zones, and intrazone circulation is minimized. Output is a printed list of the activities assigned to each zone, which resembles a "section" of the building, showing all occupancies and areas used.

Input to the Block Plan Program is a similar list of activities, areas, and interaction requirements. The program uses a plan description of the available floor area onto which the requirements are to be laid out. The objective is to place activities on the floor so that highly interrelated activities are located close together. Zones, preassignments, and fixed elements in the plan can also be taken into consideration. Output is a plan of the floor, with activities located — either printed, using line printer character graphics, or plotted on a graphics plotter.

A version of this product is available for the PDP–11 computer.

Price: $9500 – $14,500

Contact: Thomas Kvan
(213) 392–4183
THE COMPUTER–AIDED DESIGN GROUP
2407 Main Street
Santa Monica, CA 90405

SESAM–11 (Security/Access Control System)

Operating System: VMS

Keywords: • Personnel • Property management • Real time • Security

Distribution media: magnetic tape, RL02.

SESAM–11 controls entry to facilities by regulating locking devices. Multiple levels of security, from simple identity checks to privileged access, can be implemented. The intelligent terminals used to regulate the locking devices have battery backup and will continue to function even if separated from the host.

SESAM–11 can be combined with TEMPUS–11, the time and attendance system, to add security access control to real-time personnel information. TEMPUS–11 records work-force status and provides continuous input to cost centers while SESAM–11 guards access to restricted areas. SESAM–11, with its convenient credit card–like identity check, can screen personnel quickly and efficiently. Where more restrictive access is necessary, SESAM–11 can require knowledge of unique codes in order to gain entry.

Records of unauthorized entry attempts and all access by identity card and time provide indicators of potential deficiencies in the security system. Reliable equipment and efficient software can accomplish the routine, repetitious screening and checking, allowing security personnel to concentrate on enforcement, information, and interpersonal activities.

A version of this product is available for the PDP–11 computer.

Price: $12,550 – $19,975
Contact: Robert L. Hirtle
(904) 433–7578
ATS DATA PROCESSING, INC.
1101 North 9th Avenue
Pensacola, FL 32501

UNI (User Needs Information)

Operating System: VMS
Keywords: • Architecture • Data collection
• Property management

Distribution medium: 1600 bpi magnetic tape.

This set of procedures and computer programs collects and manages information about group space for architectural or interior projects. Managers' knowledge of needs for personnel, equipment, and support spaces, both current and projected, is solicited on questionnaires and interview forms. UNI manipulates square-footage data, based on the information on the forms. Reports are generated by the computer, providing the designer with an analysis of each group's square-footage needs as well as summaries for the project.

UNI is a general programming tool for preparing the analysis of client needs. UNI can be used at a general level for building sizing and area projections. At a detailed level, UNI is used for determining criteria for interior planning. The program is particularly powerful for facility programming with repetitive elements — for example, offices, medical facilities, hotels, dormitories, educational facilities, laboratories, and multiple-tenant residences.

UNI can provide three broad categories of information related to the needs of a project: personnel, equipment, and space requirements projections; special characteristics (attributes of items in the space program); and adjacency data for groups.

UNI establishes space requirements over points in time when the information is desired. Plan dates are usually set to coincide with an organization's expansion and development milestones.

UNI's information can automatically be passed in machine-readable form to The Computer-Aided Design Group's Stacking and Block Plan programs (SABA).

A version of this product is available for the PDP–11 computer.

Price: $2500 – $19,500
Contact: Thomas Kvan
(213) 392–4183
THE COMPUTER–AIDED DESIGN GROUP
2407 Main Street
Santa Monica, CA 90405

File Management

Richard Wood/The Picture Cube

ACCES Network File Management Service

Operating System: ULTRIX–32, VMS
Keywords: • Data conversion • File transfer • Networking

This comprehensive network FMS utility provides a full complement of file transfer, file access, and file maintenance services. Users can view the collective file systems of individual hosts on a network as a truly distributed file system. Through standardized interfaces, interactive or run time, complete files, individual records, or blocks can be deleted or moved. The data is automatically placed into the correct format according to the user's specifications. Directories can be created, deleted, or listed.

In addition, FMS defines and maintains at the network level a comprehensive set of file attributes for every file transferred. As a result, files moving between hosts supporting different attributes can be reconstructed without the loss of critical information. File reconstruction also occurs during file transfer.

ACCES FMS is based on the OSI Reference Model and requires a Courier presentation-layer protocol interface. The interface is provided by products such as ACC's ACCES Network Protocol Package.

The price is for binary; source is available.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: ACC
(805) 963–9431

ACC
720 Santa Barbara Street
Santa Barbara, CA 93101

Access-Controller

Operating System: VMS
Keywords: • Disk utilities • Operations • Security

The Access-Controller, developed by Bear Computer Systems, Inc., expands on the limited file protection categories of group, world, owner, and system provided by DIGITAL. With the Access-Controller, you can grant or deny file access to individual users or groups of users based on their user names, their accounts, or other identifying criteria. You may specify a "group" of users by a list of their user names and therefore not limit yourself to UIC group definitions.

For each of your groups of users, you may grant read, read/write, or no access to specified disk volumes. Management is simplified by the ability to use wildcards and exception list features.

The Access-Controller, included with the Crypto-Disk and the Disk-Reducer, is an additional-cost item for the VAX/VMS Virtual/Memory Disk, which is required to use the Access-Controller.

Price: $250
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

ACCTING

Operating System: VMS
Keywords: • Billing • Cost accounting • Operations • Report writer

Distribution medium: magnetic tape.

ACCTING produces accounting reports based on the information in the SYS$MANAGER:ACCOUNTNG.DAT file generated by VAX/VMS V3.0 and higher. This implementation accumulates information on the number of jobs (interactive, batch, and subprocess) by priority, the CPU time for all processes by priority, the connect time for all interactive processes (by category of terminal port, if desired), the number of page faults for all processes by priority, the volumes mounted by all processes, and the number of print requests and pages printed. The billed resources are CPU time, some categories of connect time, and pages printed.

(The subroutines used to interpret the types of accounting packets in SYS$MANAGER:ACCOUNTNG.DAT return all available information in the packets in directly usable form. Thus, other desired statistics can readily be accumulated.)

The full report shows detailed usage by user names in the various accounts, with the accounts in alphabetical order and with the user names alphabetized by account. A systemwide summary is prepared by UIC groups, presently implemented in eight groups.

Documentation is on magnetic media. DECUS number VAX–65.
Price: $5 – $225
Contact: DECUS (see Introduction)

ADIOM (Analog Digital Input/Output Modules)

Operating System: VMS
Keywords: • A/D, D/A • Device drivers/handlers • Disk utilities • File transfer

ADIOM provides a FORTRAN-callable interface to control data input or output devices, such as analog-to-digital converters, digital-to-analog converters, and digital devices. The package provides the flexibility of a conventional subroutine library, while allowing direct control of the hardware device and maintaining high performance. Features of ADIOM include FORTRAN-callable routines to control I/O device and

disk, high-speed snapshot single-buffer input, high-speed continuous double-buffer transfers to memory or disk file, and disk-support routines oriented toward high-speed continuous data transfers.

ADIOM is supplemented by disk-handling routines that allow data to be output or input to or from a disk file. Those routines allow high-speed continuous transfers between disk and analog inputs or outputs.

Typical performance on a PDP–11/23+ with a standard DIGITAL RL02 disk drive running under RSX–11M is more than 90,000 16-bit samples/second continuously, with no loss of data on disk.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Jim Marshall or Chris Evans
(0329) 232658
PROSIG COMPUTER CONSULTANTS LTD.
Link House, High Street
Fareham, Hants PO16 7BQ
England

ARCH (A File Archival System)

Operating System: VMS
Keywords: • Data conversion • Disk utilities • File transfer • Programming tools

ARCH provides for the easy off-line storage and retrieval of arbitrary files on a VAX system. ARCH can handle indexed, sequential, and relative Files–11 file formats, with a given type of file being allowed to have any arbitrary contents. The files are initially stored on disk, with eventual movement to tape storage. A complete history is maintained through a directory file that lists the contents of each backup tape. Each tape also contains enough information to effect a system recovery.

A file being archived is copied into a special disk directory, and an extensive entry for the file is made in the internal catalogs. While being copied, the file is changed to internal format, and two classes of user-supplied comments may be added — summary information and detailed description. Groups of files from that special disk directory can be moved to tape. The system can always be restored to the state of the latest backup tape generation, should a catastrophic disk failure occur. Several features aid the user in searching the archived files to eliminate the unnecessary dearchiving of files while searching for a particular file. When a file is retrieved (dearchived), the new user file duplicates the original file, with the option of adding the user-supplied archive comments. An internal help facility can provide assistance in all phases of the ARCH system.

Price: $975
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

Archive

Operating System: VMS
Keywords: • Disk utilities • File transfer • Operations
Distribution medium: magnetic tape.

Archive transfers seldom-used files to tape, optimizing disk space while keeping a permanent record of all transactions on a system level and an individual user level. An archive tape with a specific label series is kept on line where users can archive files off the system without operator assistance. When a tape is filled up, Archive requests an operator to load a new tape. Complete directories or individual files can be archived and then restored. To restore archived files, a request is sent to system operations through mail.

Documentation is on magnetic media. DECUS number VAX–68.
Price: $5 – $225
Contact: DECUS (see Introduction)

Archiver

Operating System: VMS
Keywords: • Disk utilities • File transfer
Archiver can reduce user disk storage and associated costs by storing seldom-accessed files on magnetic tape. The system maintains an on-line directory of files archived for each user and provides capabilities for retrieving and/or deleting files from archive storage. Archiver supports all standard VMS file organizations.

A system option is automatic archival, the process in which disk files are moved onto tape by the system rather than by the user. The system manager can choose the algorithm for migrating files.

Archiver uses a unique access method to increase both the number of files on a tape and the speed at which they are copied to and retrieved from the tape. Additionally, Archiver prevents tape failures by using primary and secondary tapes for each archived file and by detecting and correcting for tape read/write errors.

The user interface is installed as three DCL commands. The ARCHIVE command moves a file from disk to tape. The RETRIEVE command moves a file from tape to disk. The DISCARD command deletes a file from archive tape. Each command has numerous qualifiers to effect execution.

Price: $1750 – $15,000
Contact: Abby Turner
(617) 273–5500 or (800) 227–1209
STRATEGIC INFORMATION
80 Blanchard Road
Burlington, MA 01803

BIO (Block I/O)

Operating System: VMS
Keywords: • Simulation • Software utilities

The BIO package contains I/O routines that allow non–RMS/RSTS applications to be moved to VAX/VMS without changing file structure or programs. BASIC programs are modified by replacing the OPEN, CLOSE, GET, PUT, UNLOCK, and SPEC statements with calls to routines in the BIO package. BIO allows multiple block I/O transfers when shared files are used. VMS does not.

Price: $1000 – $3000
Contact: Peter J. Avenali, Marketing Director
(206) 284–4025
PARK SOFTWARE
P.O. Box 202, Northgate Station
Seattle, WA 98125

CMS (Computer Management System)

Operating System: VMS
Keywords: • Data base management • Programming tools

The file management portion of CMS consists of 10 utility programs for creating and maintaining indexed and sequential files, with 8 functions for processing those CMS files. The data management/dictionary portions are integrated with the file management programs and functions, as well as with the program generators. A precompiler converts the data dictionaries to BASIC–PLUS library files, which are appended to the user programs.

The system's three program generators generate file maintenance, report writing, and data extraction and sorting programs and are integrated with the file and data management systems. Miscellaneous program functions include data packing and unpacking functions plus programming aids and tools.

Two program packages are available that use this system — Payroll and Accounts Payable (Canadian).

A version of this product is available for the PDP–11 computer.

Price: $8000
Contact: Bill Hay
(204) 888–5253 or 832–3680
BILL HAY & CO.
1164 Crestview Park Drive
Winnipeg, Manitoba R2Y 0W6
Canada

Crypto-Disk

Operating System: VMS
Keywords: • Data conversion • Disk utilities • Information management • Security

The VAX/VMS Crypto-Disk security disk, developed by Bear Computer Systems, Inc., appears to users as an extra disk drive but actually uses space on an existing disk drive. This disk performs user-transparent encryption on all data written to that "extra" disk drive. Encryption of the data is based on a user-provided multilevel key.

This package is highly resistant to penetration and tampering and has special features to defeat passive taps and "Trojan Horse" programs. Decryption of the data may be restricted to a specific CPU or set of CPUs. A user interface is available to permit the use of other encryption programs, if desired.

Any number of Crypto-Disks may reside on the same system. The encryption rate is fast enough so that the "disks" may be cascaded for additional security, using two or more independent sets of keys.

The Crypto-Disk also includes the VAX/VMS Virtual/Memory Disk, the Disk-Reducer, and the Access-Controller and all the features of those products.

Price: $3500
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

CSCSC™–Xprint (File Printer and Line Printer Spooler)

Operating System: ULTRIX–32, VMS
Keywords: • Printing • Programming tools • Source code control

This package prints programs and other files, optionally formats output in octal or hex representation, and generates a large banner to indicate the file name, printer, account number, and supervisor. The format and style of the banner are easily changed. The system also allows management to send notices to all or selected users.

A version of this product is available for the PDP–11 computer.

Price: $500 – $2500
Contact: Paul W. Robinson
(213) 432–0829
COMPUTER SERVICE COMPANY OF SOUTHERN CALIFORNIA
465 Almond Avenue #606
Long Beach, CA 90802

Decrypter/Encrypter

Operating System: VMS
Keywords: • Security

Distribution media: diskette, magnetic tape.

The system, written in FORTRAN, permits a user to decrypt/encrypt any VMS file with a record length less than or equal to 8192 bytes. The D/E is most conducive to internal use and is not recommended for telecommunications. This restriction is minimized with error-free lines or protocols, such as those provided by DECnet or Ethernet.

A minimum of a 10-character key must be provided for the encryption process. The first 512 characters of a key generate unique encryptions; thereafter, a hashing is performed over the remaining characters. The user may encrypt a file to as many levels as desired. That is, an encrypted file can be reencrypted with a different key.

The D/E also allows the user to force random garbage into the output text, thus expanding it. The ratio of expansion for each encryption is from 31-bits-in/32-bits-out (adding 1 bit of garbage) to 1-bit-in/32-bits-out (adding 31 bits of garbage). If code expansion is used with encryption, decryption must procede in the reverse order of the encryption. Encryption with compression is detected as an error because data would be lost.

Price: $250 – $1050
Contact: G. Layton Galbraith
(505) 892–5109
SOFT KEYZ CONSULTANTS
P.O. Box 15713
Rio Rancho, NM 87174

Diagnostic Program Macros Library

Operating System: VMS
Keywords: • Diagnostics • Disk utilities

Distribution media: RX01, TU58 DECtape II cartridge.

This set of macros establishes the interface between a diagnostic program and the VAX diagnostic supervisor. The VAX Diagnostic Program Macros Library is provided in two versions: MACRO–32 and BLISS–32.

Diagnostic program macros are organized into five categories by function and method of implementation:

- Utility macros control program format through assembly and linker directives. Program control utility macros enable the diagnostic program to test specific run-time conditions and to alter program flow.
- Symbol definition macros assist the programmer by defining the global symbols required by many programs.
- Supervisor service macros include supervisor service routines that perform specific functions but do not modify program flow. Most supervisor routines return status codes and return control to the location following the instruction that called the supervisor routine.
- VAX/VMS (Virtual Memory System) service macros, a subset of VAX/VMS service macros, are available to level 2R diagnostic programs. (A few are available to level 3 diagnostic programs.) The service macros return status codes and return control to the location following the instruction that called the VAX/VMS service.
- RMS (Record Management System) service macros, a subset of which is available to all diagnostic programs.

Refer to SPD #26.25.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

Disk Compress

Operating System: VMS
Keywords: • Disk utilities

Distribution medium: magnetic tape.

Some VAX/VMS utilities and compilers allocate more storage to a disk file than is required. As a result, a portion of the disk space is wasted without the user's knowledge. Thus, on a highly used device, such as one used for development and program maintenance, many allocated blocks are wasted. That problem can be detected by doing a disk directory, using the /size=all option. If a variance of more than the disk cluster size less one exists between the actual and allocated blocks, the file has been allocated excess storage.

One solution is to copy the file into a temporary file, delete the original version, then rename the temporary file as the original, thus preserving the version number. DSKCMP.COM is a DCL utility program that performs the copy/delete/rename sequence for a specified disk account and file combination.

Note: *.DIR files are not processed. No users should be logged into the account(s) being processed. A disk compress (DSC–2) should be run after extensive use of this utility to prevent fragmentation of the disk.

Documentation is on magnetic media. DECUS number VAX–28.

Price: $5 – $225
Contact: DECUS (see Introduction)

Disk Quota Information Backup Program

Operating System: VMS
Keywords: • Disk utilities

Distribution medium: magnetic tape.

The program BCKQUOTA helps the system manager back up public disk volumes that have disk quota enabled. If backup is run while disk quota is enabled, the BACKUP command cannot open the QUOTA.SYS file and copy it to the backup tape. That file contains the disk quota information on each of the users (by UIC) for the disk being backed up. BCKQUOTA uses the QIO interface to the file system's ACPs to obtain the disk quota information for the specified disk. BCKQUOTA then formats the information for each user into DISKQUOTA commands. If the resulting file of commands is backed up with the rest of the data on the disk, the file may be used later to rebuild the disk quota information for a crashed disk. Complete help instructions are supplied.

Documentation is on magnetic media. DECUS number VAX–24.

Restrictions: Changes may have to be made if DISKQUOTA is changed with V3.0.

Price: $5 – $225
Contact: DECUS (see Introduction)

Disk-Reducer

Operating System: VMS
Keywords: • Data conversion • Disk utilities • Operations

The VAX/VMS Disk-Reducer, developed by Bear Computer Systems, Inc., appears to users as an extra disk drive but actually uses space on an existing disk drive. The product performs user-transparent compression on all data written to that "extra" disk drive and permits storing more data than the physical disk hardware would normally be able to handle. The amount of physical disk space that is used is dynamically increased or decreased, depending on conditions. Compression rates from 10% to 90% have been observed, depending on the application. Large compression ratios are obtained for program sources, listing files, word processing files, DATATRIEVE domains, and reports.

Special features are available to enhance the disk compression ratio for graphics data, program libraries, archives, and word processing. Those features also permit performance tuning by postponing compression processing to off-hours.

The Disk-Reducer also includes the VAX/VMS Virtual/Memory Disk and the Access-Controller and all the features of those products.

Price: $2750
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

DISKTEST

Operating System: VMS
Keywords: • Decision support • Disk utilities • File transfer
Distribution media: RX02, other media available.

DISKTEST evaluates disk performance while the disk is doing real data transfers in an operating computer system. DISKTEST programs report run and access times in seconds and data-transfer rates in bytes/seconds. Programmers find that DISKTEST programs provide useful information about data-transfer rates.

DISKTEST also compares the performance and economy of alternative disk subsystems. That allows system managers to analyze various disks on the market.

A version of this product is available for the PDP–11 computer.
Price: $500 – $2500
Contact: Robert C. Peckham, Vice President
(213) 849–4082
COMPUTER PROGRAMMING SERVICES
1925 W. Glenoaks Boulevard
Glendale, CA 91201

DISKUSE (Disk Usage Statistics)

Operating System: VMS
Keywords: • Disk utilities • Operations • Statistics
Distribution medium: magnetic tape.

DISKUSE and its associated command file, SPACECHCK, allow the accumulation of user disk usage statistics. The command procedure SPACECHCK is run as a batch job every day at midnight and generates the data file from which DISKUSE, when run, generates disk usage statistics by user name and account.

Documentation is on magnetic media. DECUS number VAX–33.
Price: $5 – $225
Contact: DECUS (see Introduction)

EDPC Utilities Package

Operating System: VMS
Keywords: • Data collection • Software utilities

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

The EDPC Utilities Package consists of the following:

- ADDER causes any video or printing terminal to emulate an adding machine (DIBOL).
- AMORT is used for the displaying and/or printing of an amortization table (BASIC).
- BADCHR strips files of nonprinting characters (DIBOL).
- CKDIGT develops a series of numbers for a video or a printing terminal user (COBOL).
- COUNT quickly finds the number of records in a file (BASIC).
- DISPLAY prints all or limits the number of characters for each record in a file. DISPL3 will print same as DISPLAY but also shows size of record and terminating character (DIBOL).
- DELETM reads a file created by directory and creates an indirect command file to delete certain files more than five days old (DIBOL).
- ELIMINATE creates a file containing only specified records from an existing file (DIBOL).
- GETREC displays a file block by block (BASIC).
- SEARCH allows the user to choose a specific "TARGET" in a series of files (DIBOL).
- MAIL allows any terminal user to send a message (BASIC).
- PAD pads any BASIC–PLUS or DIBOL stream file with trailing spaces after removing nulls and trailing tabs and spaces (BASIC).
- PRINTM is used for printing files when the user does not want the RSTS/E prompt to appear at the end of printing (DIBOL).
- RANDOM develops a list of random numbers (BASIC).
- STRIP strips off trailing spaces and tabs from records in a file, thus saving disk space (BASIC).
- WRITER prints a file one or more times, allowing pause for paper change and stop for keyboard insert of inside address (BASIC).
- MCRFCH (Microfiche) creates a magtape for microfiche use on certain printers and inserts reader-required tags (BASIC).
- PHONE keeps a record of phone numbers and overhead account number for analysis or rebilling purposes (COBOL).

A version of this product is available for the PDP–11 computer.

Price: $250 – $4000

Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Encryption

Operating System: VMS

Keywords: • Data conversion • Security

Distribution media: 9-track 1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This layered product encrypts user data and files, preventing anyone not knowing the encryption key from decrypting the data or making any use of the data values. This product contains a software implementation of the U.S. National Bureau of Standards Data Encryption Standard (DES). The DES encryption algorithm, when implemented in hardware, is the U.S. government standard for the encryption of data in all but certain national security applications.

This product enables customers wishing to provide a measure of protection and privacy to data stored on their systems with the utilities to do so. Customers requiring enhanced system security are encouraged to develop a complete security plan and to incorporate data encryption as one element of that plan.

Refer to SPD #26.74.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $2000

Contact: Consult your local DIGITAL sales office (see Introduction).

File Management Utility, Version 2.3

Operating System: VMS

Keywords: • Menu handlers • Printing

Memory required: 31KW for INQ; 14KW for CTL.

INQ enables a user to manipulate files with fixed-length records. INQ has the power to change a record file by its logical number or key, make a hard copy, display records, print a user file, print a record file selected by a key, and copy records from one file to another.

A key is a set of conditions that includes a data name, data value, and data operator. Each key is defined in the interactive mode.

CTL, another program, enables the user to create and manage a control file. With CTL, a user can define characteristics of a user file (record length, title), sort the data to be printed, and define the data to be manipulated. The files are password protected.

This utility is restricted to tasks running only on a VT100, and generation is only on RSX–11M or RSX–11M–PLUS. DECUS number 11–549.

Note: Each menu includes all functions and a help command. Maintenance, functions, and statistics of the programs have all been improved.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225

Contact: DECUS (see Introduction)

FILTRA: A File Transfer Program

Operating System: VMS
Keywords: • File transfer

FILTRA enables the host computer to transfer files to and from a microcomputer. Because FILTRA includes error checking, the microcomputer must have a compatible program, such as MODEM, which uses the Christenson checksum (XMODEM) protocol. Compatible programs for the VT180 and the Rainbow 100 are available commercially and in the public domain. DATATRIEVE is optional.

FILTRA, written in FORTRAN–77, uses several system subroutines and is therefore limited to the VMS operating system. Another version of FILTRA (DECUS number 11–674) is available for a PDP–11 with an IAS/RSX operating system. Files are stored on the host computer as formatted data files.

The type of data to be transferred may be either 7-bit ASCII or 8-bit data. The transfer uses 8-bit values. Binary (8-bit) files are stored as 128-byte records. ASCII files are reformatted so that each line corresponds to a record. Files produced by the Select word processing package are specially formatted to preserve hard and soft carriage returns. DECUS number VAX–78.

Note: FILTRA interfaces with DATATRIEVE and does set term commands.

Price: $5 – $225
Contact: DECUS (see Introduction)

FINDUIC

Operating System: VMS
Keywords: • Disk utilities

FINDUIC is a program to locate files owned by a particular UIC. The program asks for a disk, UIC, and output device, then opens [0,0]INDEXF.SYS on the user-specified disk. Files owned by the UIC are then entered into an alphabetically ordered tree, with the FILE ID and file size, which is obtained by opening the file by FILE ID. If the file is locked or otherwise protected against the caller, **** will be returned for the file size.

FINDUIC does not support multiheader files.

Documentation is on magnetic media. DECUS number VAX–21.

Price: $5 – $225
Contact: DECUS (see Introduction)

FIS (FMS Information System and Report Writer)

Operating System: VMS
Keywords: • Information management • Programming tools • Text management

This efficient, easy-to-use method of extracting information from the FMS-formatted files is used in the manufacturing and distribution software applications offered by NCA, Manus, and Transcomm.

FIS features access to multiple files, an interactive user interface with intelligent defaults, the ability to back up and correct or change input, and on-line help. Extensive format control includes custom headings; break logic; print masks, positions, and frequency; and sorting and totals that provide maximum flexibility.

The user can create command files with FIS so that all responses to a session may be saved. A save-selected-recorder function puts the logical record numbers of selected data into a file for quick access. FIS allows comparison, logical, and arithmetic operations.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $4000

Contact: Peter J. Avenali, Marketing Director
(206) 284–4025
PARK SOFTWARE
P.O. Box 202, Northgate Station
Seattle, WA 98125

FSMU (Multiuser Filer System)

Operating System: ULTRIX–32, VMS

Keywords: • File transfer • Software utilities

This powerful general-purpose file system reads and writes fixed-length numbered blocks and provides the caller with multilevel directories, variable-length sequential and random files, ISAM files with full or partial keys, and multiuser conflict management.

FSMU, a full-service file system with cache, keys, bitmap, and record locking, can control one or many disks, reading from or writing to a device driver. FSMU can be run "on top of" another file system, in a fixed-length relative record file.

FSMU includes definable sector and block size; file names, extensions, and keys of definable maximum length; a multilevel directory structure of arbitrary depth; fully dynamic creation and extension of directories and files; sequential or keyed, fixed- or variable-length files; read first/last/next/previous record with full or partial key; partial key operations that return full key; records that can be partially updated or extended in place; the ability to move/copy/rename file between directories; the ability to move/copy/delete key ranges; and multiuser support, including explicit and implicit file and record locking for read and read/write.

The File System Test Driver (FST) can build and execute any file system command interactively; display error codes as readable English messages; display internal tables, including cache; display and change sectors in hex/ASCII; and display file and record headers with mnemonics.

Price: Available upon request
Contact: Joel Schacht
(617) 491–4180
OASYS
60 Aberdeen Avenue
Cambridge, MA 02138

FSORT3

Operating System: VMS
Keywords: • Programming tools • Software utilities

FSORT3 is a very fast run-time system capable of sorting up to 16 million records or keys. Record and key formats are compatible with those of the RSTS–11 Sort package, into which FSORT3 may be integrated by replacing RSTS–11 Sort modules with their counterparts from the FSORT3 package. FSORT3 may also be used stand alone. FSORT3 is up to 70 times as fast as the RSTS–11 Sort package in CPU time and up to 45 times as fast in stand-alone wall time.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Martha Schriefer
(617) 861–0670
EVANS GRIFFITHS & HART, INC.
55 Waltham Street
Lexington, MA 02173

FTCOPY

Operating System: VMS
Keywords: • File transfer • Programming tools
• Source code control

This system, written in VAX–11 MACRO and developed by the Woods Hole Oceanographic Institute, reads and writes foreign (unlabeled) tapes. FTCOPY allows deblocking and blocking of data records on input and output, translation of character codes (EBCDIC, ASCII, 7-bit ASCII, and so on), padding output records and/or blocks to specified lengths, and making output blocks an even number of bytes. This system also allows control over odd-length logical records that remain at the end of input blocks after deblocking.

Price: $375
Contact: Mark E. Ogram
(602) 296–6400
RESEARCH CORP./RESEARCH SOFTWARE
6840 E. Broadway
Tucson, AZ 84710

FTU (File Transfer Utility)

Operating System: VMS
Keywords: • Asynchronous communication • File transfer

FTU uses an RS 232 or 20mA asynchronous serial communications link to transfer files in either direction between PDP–11 systems and VAX systems. Any combination of hardware and operating system at either end is acceptable. An additional mode allows use of a parallel connector in conjunction with control over the serial link for higher-speed transfers.

FTU automatically logs on to the remote system and initiates a slave program for the transfer of files. On completion of the file transfers, the slave task is terminated, and FTU logs out from the remote system and then exits. No action is required by an operator at the remote site of multiuser systems.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Jim Marshall or Chris Evans
(0329) 232658
PROSIG COMPUTER CONSULTANTS LTD.
Link House, High Street
Fareham, Hants PO16 7BQ
England

Handle Access™

Operating System: ULTRIX–32
Keywords: • Graphics • Networking • Office systems • Spreadsheets

Handle Access allows any Handle product to read and import or dynamically reference data from mainframe data bases. Through Handle's integrated system, information can be incorporated into a spreadsheet or a document or plotted with Handle Graphics. Any Handle document can be exported to existing systems files.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Karan Kauppila
(916) 583–7283
HANDLE CORP.
P.O. Box 7018
Tahoe City, CA 95730

HCR/Menu Shell

Operating System: ULTRIX–32, UNITY, VMS
Keywords: • Development tools • Programming tools

HCR/Menu Shell lets you make your own menus for using UNIX*. You can choose the keywords listed at the top of the screen or you can issue the UNIX* commands directly. The addressable menu fields can link with other programs. HCR/Menu Shell is an enhancement to the UNIX* Shell. No overhead exists on the system while the program is running. HCR/Menu Shell can be adapted to other UNIX* configurations for OEMs.

A version of this product is available for the PDP–11 computer.

Price: $750 +
Contact: Sales Department
(416) 922–1937
HUMAN COMPUTING RESOURCES CORP.
10 St. Mary Street
Toronto, Ontario M4Y 1P9
Canada

HEX: Hex File Editor

Operating System: VMS
Keywords: • File transfer • Software utilities

HEX, designed to manipulate ASCII hex-formatted files as output by cross-assemblers and linkers for microprocessors (Z80, 8085, 68000, and so forth), supports the Intel, TEKHEX, Extended TEKHEX, Motorola, and MOSTEK ASCII hex formats. The principal component of HEX is a 32K–byte virtual memory area that allows the user to manipulate code in memory as if it were in the target machine. The 32K-byte virtual memory can be extended to cover the entire 2**32 address range by way of the OFFSET command. HEX handles 16-, 24-, or 32-bit addresses.DECUS number 11–480.

A version of this product is available for the PDP–11 computer.

Price: $5 – $225
Contact: DECUS (see Introduction)

IFMOD: Module Regeneration Utility Aid

Operating System: VMS
Keywords: • Software utilities

This program determines whether a source file has been modified since the last time it was compiled. IFMOD compares the modification dates of specified files and, depending on whether the results are true or false, executes a user-specified DCL command. If file A is used to generate file B, IFMOD can be used to determine whether file A has been changed since the last time file B was created and regenerate file B if necessary. Complete help instructions are supplied with the program. DECUS number VAX–80.

Price: $5 – $225
Contact: DECUS (see Introduction)

IMON (Image Monitor)

Operating System: VMS
Keywords: • Debugging • Disk utilities • Programming tools

IMON, developed by Bear Computer Systems, Inc., gathers samples from a running program and produces a histogram display of where the time is being spent in the program. The display indicates that process by specific routine names and can even go to the resolution of showing the exact line numbers in the routines. IMON can also display the time spent in the various scheduling states and processor modes for just the running program being sampled.

From any user terminal on your VAX, you can run IMON and specify the process ID, the process name, or the image name. IMON takes a number of samples and then displays the data in the form of a bar chart. After IMON is started, the user may change many of the sampling and display parameters dynamically.

You do not need to relink or recompile the program to be examined. Routine names and line numbers are displayed as long as the program was not built with the no-trace options. Otherwise, a load map would be helpful. IMON is essentially language independent. Hard copy and file storage of raw data and displays are available for off-line study and analysis. The user will find IMON easy to use with the on-line help facility.

Price: $2500
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

INSTENT (Instant Entry)

Operating System: VMS
Keywords: • Data entry • Decision support • Disk utilities • Security

This program provides a fast and easy method of entering information directly to a disk. INSTENT permits the definition and storage of control parameters, the verification of existing data, and the processing of variable-length records. INSTENT runs on a wide variety of terminals and enhances, through special control commands, the user's ability to process information.

A method of verifying data is a standard feature within INSTENT. This capability saves a company valuable time that might otherwise be wasted in processing inaccurate data.

INSTENT allows control parameters to be stored in a secure location to eliminate unauthorized changes. A supervisory password is then required to permit the modification of stored parameters.

INSTENT provides a method for storing data directly on a disk. That method makes the information immediately available for processing and eliminates potential errors caused by transferring data from other storage sources.

Price: Available upon request
Contact: Gary M. Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

INTACT (Integrated Application Control System)

Operating System: VMS
Keywords: • Asynchronous communication • Forms management • Networking • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, cassette, diskette.

INTACT, a transaction-processing system with interactive and batch-processing capability, provides terminal, file, and network management. Applications are written in any language that supports the CALL verb. Terminal screens (or forms) are managed by INTACT and kept separate from the application. File management is implemented through DIGITAL's RMS services, is asynchronous, and is under INTACT control for maximum performance. Since INTACT runs on the complete VAX and PDP families, compatibility is ensured. Network management is performed through DECnet, and INTACT systems are peers, allowing a completely distributed system.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $15,000
Contact: Marie C. Murphy
(201) 798–6400
ADVANCED SYSTEMS CONCEPTS, INC.
22 Hudson Place
Hoboken, NJ 07030

IRIS–MINI

Operating System: VMS
Keywords: • Application development • Data base management • Report writer

This software application tool permits the inexperienced user to set up programs, using menus. The system is modular and allows the user to customize IRIS–MINI. Menus, screens, messages, function keys, and the language can be changed without modifying the program.

At data entry, IRIS–MINI checks the data according to the user's specifications. IRIS–MINI transfers data across files, enabling the user to do global updates. IRIS–MINI also allows the user to scan or see cross sections of records.

The report feature allows various formatting functions for the production of invoices, statements, and documents. A cross-tabulation feature produces statistical reports.

The system does not require the user to have computer experience or training. IRIS–MINI consists of the main program, MULTI–FILE, utilities, and documentation. Demonstration kits are available for $350.

A version of this product is available for the PDP–11 computer.
Price: $3995 – $4795
Contact: Paul Lennard
(714) 771–7744
LENNARD SYSTEMS
3139 East Almond Avenue
Orange, CA 92669

ITU–11 (Intersystem Transfer Utility)

Operating System: MicroVMS, VMS
Keywords: • File transfer • Software utilities

Distribution media: 9-track 800/1600/6250 bpi magnetic tape, RL02, RX50.

This interactive utility transfers any kind of file between any two DIBOL-based operating systems. Those files can include programs, tasks or commands, data and sequential files, and many others. Handling characteristics allow the transfer of special characters, such as CTRL/Z, inside the transfer.

Operation is controlled from the local system. Remote sites can be installed through phone lines from the local system, using the autoremote installation of ITU. Once a connection has been established, the utility allows the local operator to log in and run applications on the remote system, send files from the local to the remote system, or receive files from the remote system. Licensing is only for the local system, allowing any number of remote sites.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: Sales Department
(806) 792–3785
COMPU–SHARE, INC.
3824 50th Street
Lubbock, TX 79413

LAD/11 (Local Area Devices) for RSX

Operating System: VMS
Keywords: • Device drivers/handlers • Networking • Real time • Telecommunications

LAD/11 extends the file system of RSX operating systems, making the RSX file system function as a distributed network. Available for Micro/RSX, RSX–11M, and RSX–11M–PLUS, LAD/11 allows symmetric, transparent access to all disk and data resources in a network through standard RSX disk and file I/O operations. No changes are made to existing software. RMS, FCS, checkpointing, overlaying, and task loads all operate transparently to and from any system in the network.

One example of LAD/11's potential is its use in clustered RSX system configurations. Through special hardware and VMS software, up to 16 VAX computers can share disks and data files. With LAD/11, any number of RSX systems can share disks and data files, and applications can use standard RSX record-locking facilities and file-access controls as needed.

LAD/11 is designed to be interfaced with any type of data communications software and hardware subsystems. Thus, a customer can configure an RSX cluster, using the network technology that best meets application requirements. Standard interfaces provided with LAD/11 include RS–232, point to point through RSX message class drivers, DECnet, and Ethernet. Additional interfaces are available as options, or custom interfaces can be easily developed.

LAD/11 is particularly appropriate for use in broadband and baseband LANs but is a powerful tool in any distributed application environment.

A version of this product is available for the PDP–11 computer.

Price: $625 – $1500
Contact: Larry R. Jasper, President
(314) 394–1600
MERIDIAN TECHNOLOGY CORP.
P.O. Box 2006
St. Louis, MO 63011

Lazer Data Base Management System

Operating System: VMS
Keywords: • Data base management
Distribution medium: magnetic tape.

Lazer offers hierarchical, network, or multikeyed access. Lazer features an unlimited number of elements for each record, as well as one billion records for each file, 64 file extents for each data base file, and 120 files for the data base. Lazer accommodates up to 99 users of the data base and accesses up to 6 data bases for each process. A data base has eight megabytes of buffer space, with buffer sharing between files, and record-holding and file-locking facilities have automatic rollback of unfinished updates due to system failure. Lazer also provides an automatic switch to shadow files, in case of hardware error. The data base manager is implemented as a protected shareable image, coded entirely in MACRO–32.

Price: $12,000 – $15,000
Contact: Patricia Boittiaux
(403) 236–6126
CANALTA
7100 44th Street, S.E.
Calgary, Alberta T2H 1X2
Canada

LOGIX

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Compilers • Data base management
• Query facilities • Report writer

This relational data base management system is uniquely configured for the UNIX* operating system. LOGIX is fully integrated with UNIX* and offers such UNIX* facilities as I/O redirection, pipes, and filters. LOGIX enables users to create, edit, and manipulate relations through a set of interactive commands. LOGIX also generates reports, prints forms, and updates relations, using interpreted or compiled queries.

A versatile and flexible query language includes:

- SelectQ, an interactive query dialect that selects items, based on specific conditions, from one or more relations and places the result in a new relation

- QuickQ, an interpretive query programming dialect that expresses query programs to be interpreted and executed immediately, as well as output format statements for report writing
- CompileQ, a query dialect that precompiles QuickQ queries and integrates them with C-language macros and function calls

Application development time is decreased, and testability and maintainability are increased when programmers write in a high-level query language, such as Q.

LOGIX also provides an interface to the C programming language in addition to the tools required for developing sophisticated data management applications, from prototyping to final installation.

LOGIX runs on all major microprocessors, including the Z8000, DIGITAL's PDP–11 series, the 8086, and 68000 machines.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $15,000
Contact: Ilona A. Lappo
(617) 864–0137
LOGICAL SOFTWARE, INC.
17 Mount Auburn Street
Cambridge, MA 02138

MATCHMASTER™

Operating System: VMS
Keywords: • Data conversion • Debugging • Query facilities • Software utilities

This file service program can edit, clean, compare, change, move, translate, copy, display, count, and create data. The program does file matches, splits, conversions, creations, ASCII transmissions, minireports, and duplicate record elimination.

MATCHMASTER accepts standard file types and provides hands-on data inquiry and manipulation without data dictionaries, allowing immediate use by users familiar with file formats. Custom interfaces are easily built with the system command processor.

MATCHMASTER includes unlimited logic compounding with Boolean and Boolean shortcuts, bidirectional and nested scanning, an English-language summary, and an optional hard-copy audit trail.

A version of this product is available for the PDP–11 computer.

Price: $1400 – $1900
Contact: Steve Gant, Vice President
(212) 608–8045
PALACE COMPUTER SERVICES, INC.
125 Cedar Street
New York, NY 10006

Menu Presentation Software

Operating System: ULTRIX–32
Keywords: • Menu handlers • Programming tools
Distribution media: 9-track magnetic tape, diskette.

The Menu program allows rapid development of interactive menus for application systems. The menu layout and the action sequences are specified in editable menu files, allowing quick prototyping and modifications. Separate menu files may exist within the system so that different applications or classes of users can be accommodated.

The Menu program can substitute for /bin/sh as the user's log-in shell. Thus, an application environment can be created that completely isolates operators from the need to access facilities to which they may not or should not be given access.

The Menu text file describes the screen layouts that can be presented to the user. That file allows specification of command lines, status lines for informative messages, prompt lines, menu choices, the date, and emphasized lines — for example, double-sized characters — for terminals having appropriate hardware capability.

The Menu command file is specified as if it were a case statement, where the case selector represents a user input. The following commands can be executed within a case: run a program (with arguments), execute a string as a shell command, display a status message, display a prompt, read input from the user, wait for user response, and go to another menu.

A version of this product is available for the PDP–11 computer.
Price: $200
Contact: Douglas J. Ross, Vice President
(613) 548–4355
ANDYNE COMPUTING LTD.
P.O. Box 1496, 221 King Street, East
Kingston, Ontario K7L 5C7
Canada

Menumaker

Operating System: VMS
Keywords: • Menu handlers • Operations • Programming tools • Security

This package incorporates the best in menu-driven software from log in to log out on VAX systems. Menumaker allows a uniform menu system across a number of applications, has up to eight levels of menus, and can be invoked by either an external call in a program or from DCL in command files. Menu options can be programs, DCL commands, and command file names and can be restricted by up to 40 categories of users. Each option can be password protected, adding another level of security. Menumaker provides facilities for locking users out of an

application system, time-of-day locks, and extensive audit trail recording. The audit trail includes details of option, operator, terminal, elapsed time, CPU time and direct IOs. Some analysis source programs are included, giving usage statistics.

Price: Available upon request
Contact: J. Read
(002) 30 3300
ELIZABETH COMPUTER CENTRE
Warwick and Murray Streets
Hobart, TAS 7000
Australia

Monitor

Operating System: VMS
Keywords: • Disk utilities • Operations • Programming tools

Distribution medium: 1600 bpi magnetic tape.

Monitor makes a file copy of a terminal session by intercepting data traveling through the logical-name tables. Any program that reads from a logical, such as SYS$INPUT, and writes to a logical, such as SYS$OUTPUT, can be monitored. That includes almost all applications and most system utilities. Monitor does not interfere with normal program-terminal communication and requires no special privileges or installation.

Price: $250 – $395
Contact: Tim Bomgardner
(812) 339–5854
RANDOM ACCESS, INC.
Box 2094
Bloomington, IN 47402

Nanny (Binary)

Operating System: VMS
Keywords: • Disk utilities • Operations

Memory required: 75KB. Distribution medium: magnetic tape.

Nanny is a detached process that maintains a balance of CPU for all processes for checking disk drives for errors or excessive use, performing memory management functions, allowing individual users special commands, manipulating processes with the same UIC, and doing other functions available to system or nonsystem users. DECUS number VAX–66.

Price: $5 – $225
Contact: DECUS (see Introduction)

Network File Server Protocols

Operating System: VMS
Keywords: • Communications • File transfer • Networking • Telecommunications

Distribution media: diskette, magnetic tape, TU58 DECtape II cartridge.

These products, written in portable C, provide network file services among multiple host systems, including VAX/VMS, 68000/UNIX* System V, and MS–DOS. Layered on the services of the NS4200 Internet Transport Protocols (XNS/ITP), the NS7400 products allow a user program to access a file located on another host system through the internetwork. A File Transfer utility (FTX) is also provided to allow an interactive terminal or PC user to issue high-level DCL-like commands to access remote files. Text conversion, data compression, and image-mode transfers are other key features. A User Authentication protocol certifies what privileges a particular user may have on a specific host system.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $995 – $11,950
Contact: William M. Seifert
(617) 692–3900
INTERLAN, INC.
3 Lyberty Way
Westford, MA 01886

NUCLUSTER.COM

Operating System: VMS
Keywords: • Data conversion • Disk utilities • File transfer

NUCLUSTER.COM provides a means for changing the cluster factor on a system and/or user disk. The program can be used for system disks on systems with more than one disk drive (one for the source system disk and the other for the new disk), as well as on nonsystem disks on systems with more than two disk drives (one for the system disk, one for the source disk, and the third for the new disk). The routine is designed to copy the first-level directories and files from the "source" disk to the new "target" disk while retaining the owner UIC and file protection; however, the file-creation date becomes the date the routine was run. A change to the routine will be required to pick up the subdirectory files; the listing for a routine to locate subdirectory files is appended to the NUCLUSTER.COM listing as a guide. Documentation is contained in the listing. The routine prompts the user for required data. DECUS number VAX–7.

Price: $5 – $225
Contact: DECUS (see Introduction)

OneShot

Operating System: ULTRIX–32
Keywords: • File transfer

OneShot is the missing link between the microcomputer and the mainframe. This program fills the gap in moving information from the mainframe data base to local productivity tools on the PC. OneShot makes central information available for local manipulation without retyping.

OneShot can be used by any F1000 employee who has access to mainframe data and needs to work it on a PC. OneShot downloads mainframe data, creates its own template, and makes the data immediately usable on the PC.

A version of this product is available for the PDP–11 computer.

Price: $195
Contact: DataViz
(203) 866–4944
DATAVIZ, INC.
P.O. Box 1319
Norwalk, CT 06856

OS/FT (File System)

Operating System: ULTRIX–32, VMS
Keywords: • Data conversion • Instrumentation
• Process control • Simulation

This superset of the UNIX*-style hierarchical file system provides the hierarchical function of UNIX* systems yet can, because of its design, allow expanded hierarchical directories. OS/FT's primary function is to provide a hierarchical file system for OS/RT, Destek's real-time, multitasking operating system kernel. OS/FT was designed to be used in any disk-based process control, instrumentation, simulation, or communications control application. Additional utilities for the file system allow UNIX*, CP/M, and MS–DOS files to be ported directly to OS/FT files. OS/FT is available in object or C source code.

A version of this product is available for the PDP–11 computer.

Price: $600 – $3000
Contact: Dennis Rieger
(408) 737–7211
THE DESTEK GROUP
830 East Evelyn Avenue
Sunnyvale, CA 94086

PHACT ISAM

Operating System: MicroVMS, VMS
Keywords: • Data dictionary • Query facilities
• Software utilities

This ISAM file manager is a keyed B+ tree file access. PHACT ISAM has record locking, which allows multiuser applications. PHACT is a library of C functions, which are callable from any program. The system supports fixed- or variable-length records. Up to nine alternate indexes are supported. PHACT includes high-level utilities to build and maintain ISAM files. Records can be accessed on full or partial key.

Price: $2500

Contact: Joyce Bielen
(201) 985–8000
UNIPRESS SOFTWARE, INC.
2025 Lincoln Highway
Edison, NJ 08817

Photo

Operating System: VMS

Keywords: • Diagnostics • Project management • Software utilities

This VMS utility program allows users to log their own or any other terminal sessions into a file. When Photo is running, each character sent and received at the terminal is recorded in a file and may be redisplayed later, using the playback feature. Photo can document an obscure occurrence or a software bug with messages and traceback directly from the program; prepare transcripts of dialog with a computer; keep a journal file of session activities to keep track of a user's progress; and monitor data entry for possible system abuse and software problem resolution. Photo requires no extra hardware or modifications to existing system software. Any number of users can run Photo simultaneously. Photo also has a low overhead for each user. Photo, completely undetectable by nonprivileged users, is written in BLISS.

Price: $495

Contact: Arthur Cacossa
(212) 425–0200
PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

PRETTY

Operating System: VMS

Keywords: • Diagnostics • Quality control • Source code control • Software utilities

Distribution medium: magnetic tape.

This utility program formats BLISS source and require files so that they correspond to generally accepted formatting standards. PRETTY is written in BLISS and runs on DECsystem–10, DECSYSTEM–20, and VAX computers. Although PRETTY does perform syntax checking, its main function is formatting.

Output format is tailorable through a set of commands embedded as BLISS comments in the sources being formatted. PRETTY supports BLISS V3.0 syntax. A maintenance document describing the functions of several of the main modules, guidelines for adding new BLISS syntax and user commands, a user's guide, help files, and command files on building PRETTY to run on various machines are included on the media. DECUS number VAX–71.

Restrictions: The following system files do not contain sources: Starlet (VAX) and Xport (VAX). Xport is shipped with BLISS. PRETTY handles BLISS syntax through V3.0. Input of more than 132 characters a line creates an access violation due to the fixed size of the string buffer.

Price: $5 – $225
Contact: DECUS (see Introduction)

PRODUCER Interpreter

Operating System: MicroVMS, VMS
Keywords: • Graphics • Interpreters

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

The VAX PRODUCER Interpreter reads and processes files produced by the VAX PRODUCER Development System. Two types of files are supported: display libraries, which are created by the VAX DRAW graphics editor and hold the visual information, and interpreter files, which are created by using the VAX DESIGN Preprocessor and Linker and contain the branching, response, and judging information. VAX DESIGN, the VAX PRODUCER language used to create highly interactive and graphically oriented programs, may be used in such applications as computer-based instruction (CBI), point of purchase, or information retrieval.

The VAX PRODUCER Interpreter can also call other programs on the VAX/VMS or MicroVMS system as directed by commands in the interpreted files.

Refer to SPD #26.53.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $100 – $150
Contact: Consult your local DIGITAL sales office (see Introduction).

QREQUEST

Operating System: VMS
Keywords: • Data base management • Operations • Security
Distribution medium: magnetic tape.

QREQUEST allows a VAX/VMS user without the OPER privilege to start, pause, and stop device queues, as controlled by a file of authorized USERNAMES and a file of implemented options. The program also generates a log file of usage. Also included is a DCL command procedure for the maintenance of the authorization file. (All files used by QREQUEST are kept in SYS$SYSTEM:.)

Documentation is on magnetic media. DECUS number VAX–34.
Price: $5 – $225
Contact: DECUS (see Introduction)

QSORT

Operating System: VMS
Keywords: • Disk utilities • Programming tools
• Software utilities

This flexible, efficient, and high-performance sort routine, developed by ABSCO Systems Corp., generally requires 1.5 times the input file for work space. That space can be allocated to any random-access device supported by the system. QSORT can be chained to execute another program upon completion and may be called by any language that supports core common.

To make operations simple, a single command line is used to describe the sort on a new disk. For users of DIBOL or MCBA sort generators, compatible translators are available to eliminate the need for most major program changes when converting to QSORT.

QSORT for CTS–500/RSTS/E is a run-time system rather than a standard program, causing QSORT to be reentrant. Thus, only data, not the program, swaps in and out, and only one copy of QSORT is ever loaded into memory.

A version of this product is available for the PDP–11 computer.
Price: $1200
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

RABBIT–5

Operating System: VMS
Keywords: • Disk utilities • File transfer • Operations
• Software utilities

This full and incremental high-speed file-backup and restore system contains I/O techniques that often save or restore files as quickly as tape-passing speed. In a busy installation with a large disk system, RABBIT–5 can save many hours of time each week.

RABBIT–5 handles many backup choices, letting you choose which files you want to save or restore. The system provides full wildcarding in file specification; exclusion file lists; a verify option and a variety of progress-reporting options; optional update of file-backup data; incremental saves based on backup date, creation date, modification date, and file size; checkpoint restart options; a full UIC protection scheme; implicit recreation of directory structure on restores; and an internal tape-labeling procedure and tape-positioning procedures.

The RABBIT–5 mini–tape librarian keeps you up to date on which tapes are in use, so later runs will use different tapes. Tape identifiers show which tape to mount when a continuation reel is required. RABBIT–5 runs virtually by itself, without tape confusion.

RABBIT–5 facilitates file transfer from disk to tape for off-line storage. In the novice mode, the system asks you easy fill-in-the-blank questions. In the expert mode, RABBIT–5 simply asks for your orders, which you then give by prompt commands. RABBIT–5 will save or restore your files for you.

RABBIT–5 is fast, automatic, and easy to use. It can save a 40-megabyte file in less than 2 minutes and use only 12 CPU seconds.

Price: $3995 – $4495
Contact: Joseph Musler
(301) 258–2620
RAXCO, INC.
1370 Piccard Drive
Rockville, MD 20850

/rdb™ (Relational Data Base Management System)

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Data base management • Programming tools

This relational data base management system is easy to use, inexpensive, portable, and powerful. You can create a table as a flat UNIX* ASCII file with a text editor. UNIX* shell-level programs use standard in and out and pipes. Data is kept in UNIX* flat ASCII files. The table only needs tabs between columns and column names on the first line. Then all the 50+ shell-level and pipeable programs can manipulate the files without the overhead of schema, data dictionaries, or fixed-length records.

The /rdb system is fully relational. You can project columns, select rows, join tables, compute, do cash flow, sort, union, validate, and so on. The system generates reports, mailing labels, form letters, and more.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $500 – $700

Contact: Rod Manis
(713) 465–4499
MULTINATIONAL SOFTWARE, INC.
P.O. Box 440938
Houston, TX 77244-0938

Recording VT100 Input/Output Transactions to a File

Operating System: VMS

Keywords: • File transfer • Networking • Security

Distribution medium: magnetic tape.

This technique records both inputs and outputs to any terminals on a file. The technique involves mailboxes and ASTs under VAX/VMS. Mailboxes intercept the input and output traffic, allowing it to be sent to a file or a terminal. The file may be printed later, showing everything that appeared on the screen. DECUS number VAX–73.

Restrictions: Two images must run with CMEXEC privilege. The process must have TMPMBX privilege and be able to create a subprocess.

Price: $5 – $225

Contact: DECUS (see Introduction)

RS/1–Plus™

Operating System: VMS

Keywords: • Data base management • Graphics • Research • Statistics

Distribution medium: 9-track 1600 bpi magnetic tape.

This generalized data management system handles the research scientist's information needs. Features of RS/1–Plus include data storage and retrieval; data transformation and analysis, graphics, statistical analysis, curve fitting, and analytical models; the ability to tailor the system through a PL/I-like structured programming language that is fully integrated into the data management features; the ability to interface to data-gathering systems, data base management systems, and other statistics packages; full graphics support for GIGI, the VT125, and LXY–11/LXY–21; unlimited table size and type; PEN, a built-in screen editor; and a help facility.

DIGITAL distributes this software product under license from Bolt Beranek and Newman, Inc.

Refer to SPD #A1.65.xx when requesting further information on this product from your local DIGITAL sales office.

RS/1–Plus™ is a trademark of Bolt Beranek and Newman, Inc.

Price: $19,000 – $32,500

Contact: Consult your local DIGITAL sales office (see Introduction).

RT–11 to UNIX* Transfer Utilities

Operating System: ULTRIX–32, UNIX* (System III)
Keywords: • File transfer • Programming tools
• Software utilities

Distribution media: 9-track magnetic tape, diskette.

These utilities provide routines for accessing RT–11 file systems from UNIX* systems. Facilities include reading, writing, and deleting RT–11 files; initializing RT–11 file systems; and obtaining directory listings.

Written in the C programming language, the utilities are portable to any UNIX* system. All routines allow for multiple RT–11 directory segments, thus making the package useful for maintaining large RT–11 file systems, as well as floppy-based systems.

RT utility commands are entered to the UNIX* shell, so a user has full use of shell facilities such as I/O redirection, pipes, filters, and file name expansions. In addition, RT utilities support RT–11–type wildcards.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $500
Contact: Douglas J. Ross, Vice President
(613) 548–4355
ANDYNE COMPUTING LTD.
221 King Street East, P.O. Box 1496
Kingston, Ontario K7L 5C7
Canada

RT–DBASE

Operating System: VMS
Keywords: • Data base management • Project management

Distribution media: RX02, other media available.

RT–DBASE is a package of mailing list/data storage programs written in FORTRAN and MACRO. The menu-driven RT–DBASE programs store, alter, search, and do housekeeping for the disk data base.

In addition to the usual name, address, and telephone data, the data base structure contains nine 6-byte user spaces with each entry for date of last contact, type of client, tax status, and spectra-on-file type data.

The data base is formatted on disk so that it can be inspected directly. Direct file modification, even a data file deletion, will not cause the data base maintenance system to crash. Interface subroutines for the user spaces are very easy to write, as are routines for general access to the data base.

The RT–DBASE package includes well-documented source code and a printed instruction manual.

A version of this product is available for the PDP–11 computer.

Price: $350

Contact: Robert Peckham, Vice President
(213) 849–4082
COMPUTER PROGRAMMING SERVICES
1925 W. Glenoaks Boulevard
Glendale, CA 91201

RT–NEWUSER V2.0

Operating System: VMS

Keywords: • Language enhancers • Programming tools • Security

Distribution media: RX02, other media available.

RT–NEWUSER is a collection of more than 90 FORTRAN and MACRO subroutines and other items to speed up programming and help overcome the problems a new RT–11 user encounters. In addition, RT–NEWUSER tools can help the experienced RT–11 user eliminate input conversion errors by using "ASK" subroutines, do VT100 screen control with simple subroutine calls, and protect programs from unauthorized use with password function MONKEY.

The RT–NEWUSER programs, subroutines, and functions are supplied as easy-to-follow, well-documented FORTRAN and MACRO source.

A version of this product is available for the PDP–11 computer.

Price: $350

Contact: Robert Peckham, Vice President
(213) 849–4082
COMPUTER PROGRAMMING SERVICES
1925 W. Glenoaks Boulevard
Glendale, CA 91201

Select

Operating System: VMS

Keywords: • Programming tools • Software utilities

This general RSTS/E record-extraction package is useful, for example, as the front end of a report-generating application. Select quickly extracts from an input file records meeting user-specified selection criteria. The extracted records are written to an output file after optional modification by key field deletion, rearrangement, and transformation through user-written MACRO–11 functions. Fields in an input record are named and described in a succinct notation that tells where they are; where to put them, if necessary, in a corresponding output record; and how to use them to sort the output file that Select creates. Fields

may be ASCII strings, integers, or floating-point numbers. For producing "tag" files, a field may be placed in each output record to point to the input record that generated it. Records are selected by Boolean combinations of comparisons of fields against constants. Input files contain fixed-size records. Output records are fixed-size, no more than 512 bytes long. The time-critical components of Select are written in MACRO–11.

A version of this product is available for the PDP–11 computer.

Price: $1500
Contact: Martha Schriefer
(617) 861–0670
EVANS GRIFFITHS & HART, INC.
55 Waltham Street
Lexington, MA 02173

SETPRV: Privilege on Demand Utility

Operating System: VMS
Keywords: • Operations • Security • Software utilities

Memory required: 512KB.

This 2-program utility creates an audit trail and allows control of users who require special privileges. The utility allows system management and operations personnel to control and audit requests for privileges.

The first program is used to maintain the data file containing an authorization code, user name, privilege classification, and, optionally, time of day and device restrictions or a list of authorized privileges. The second program parses a command line, validates a request, notifies an operator, and sets or resets privileges. Optionally, this program can allow an operator to veto or permit a request for privileges.

A command line description is used to define a standard command line. That defines the optional and required qualifiers and parameters used with the program.

A MACRO definition file is also required to obtain the symbol definitions for privileges and the associated masks. DECUS number VAX–75.

Restrictions: VMS V4.0 may require some source modes.

Price: $5 – $225
Contact: DECUS (see Introduction)

SLIM/1: File Compression Utility

Operating System: VMS
Keywords: • Data conversion • Disk utilities • Security
• Telecommunications

SLIM/1 reduces the size of any text or binary file by 20% to 80%, using Huffman Coding statistical techniques. The resulting compressed file is a standard file compatible with DECnet, PIP, BRU, and so on. In compressed form, a file takes up less space on storage media, requires less transmission time for communications, and is more secure from unauthorized viewing.

SLIM/1 uses standard PIP-type commands with full wildcard support. Compression and reexpansion for active use are comparable to PIP copies in command format and operation time.

A version of this product is available for the PDP–11 computer.

Price: $900

Contact: Ross Amann, Vice President
(212) 695–5001
RGTI SYSTEMS SOFTWARE
One Penn Plaza
New York, NY 10001

SLY

Operating System: VMS

Keywords: • Security • Software utilities

Memory required: 200KB. Distribution medium: magnetic tape.

SLY allows privileged users to change their process's user name, UIC, or both. SLY USER allows the user to set his/her user name, provided it exists in the User Authorization File. SLY UIC allows the user to set his/her UIC to any valid UIC. SLY ALIAS changes the user name and sets the UIC according to the user record found in the UAF. SLY also includes a complete set of routines for accessing records from the UAF, by either sequential or keyed access. DECUS number VAX–70.

Restrictions: Users must have CMKRNL privilege to use SLY.

Price: $5 – $225

Contact: DECUS (see Introduction)

SOLUTIONS DECk Dictionary

Operating System: VMS

Keywords: • Data base management • Data dictionary • Query facilities

SOLUTIONS DECk Dictionary is designed to interactively produce complete file descriptions and open statements in a matter of minutes. The dictionary is driven by the user's replies to an on-line interactive dialog. The user is guided in describing any file with maximum use of defaults. The open statement and file description are created from user replies or defaults.

The dictionary quickly and accurately describes any RMS–11 file type and ensures consistent file descriptions and the existence of only one named version. Through use of channel assignments, all files have unique line numbers to prevent later line number problems when several dictionaries are used in one program.

SOLUTIONS Dictionary belongs to the family of SOLUTIONS DECk preprocessors, designed to support all program types found in an on-line commercial environment, and should provide a 100% productivity improvement, even in casual use.

A version of this product is available for the PDP–11 computer.

Price: $250
Contact: W. R. Hallam
(506) 455–1008
SOLUTIONS DECK
P.O. Box 684, Station A
Fredericton, NB E3B 5B4
Canada

Some Useful Command Files for VMS

Operating System: VMS
Keywords: • Operations • Software utilities

This collection of command files for lazy VMS users includes procedures that remember the last file edited, compile and link or process files based on extension, control file deletions, and aid in listing 132-column files on VT100 and LA120 terminals. Also provided are log-in and log-out files that remember parameters (used by those procedures) across logouts.

A program that generates random sayings from a source file is provided, including a selection of sayings from Murphy's Law. Typical use would be to produce a saying as part of the log-in message.

Documentation is on magnetic media. DECUS number VAX–18.

Price: $5 – $225
Contact: DECUS (see Introduction)

SPRINT: A Program for SPSS and SPSS–X

Operating System: VMS
Keywords: • Engineering • Statistics

Memory required: 64KB.

This program takes the file name or list of the file names from the DCL command line and checks to see if they were generated by SPSS or SPSS–X. If they were, the program reads each line of the file, checks for a FORTRAN-type form-feed carriage control character, and blanks that character out. If the program finds a double-space carriage control, it becomes a line feed. When the file processing is done, a new file, with appropriate carriage control removed, exists in the directory. If

the file the user wants to print was not generated by SPSS or SPSS–X, the file drops through the program and executes a regular DCL PRINT command. Finally, the program builds a command line and passes it back to DCL for execution. Commented source code serves as the documentation. DECUS number VAX–100.

Price: $5 – $225
Contact: DECUS (see Introduction)

Tape Librarian System

Operating System: VMS
Keywords: • Operations • Security

Distribution media: 9-track 800/1600 bpi magnetic tape, RX01, TU58 DECtape II cartridge.

This system streamlines and simplifies tape accessing. The system maintains an on-disk directory file of each tape, thus allowing the user to search for specific files without having to mount the tape on the tape drive. Simple commands allow the user to search the directory and selectively issue commands to read or write files to or from the selected tape. Any commands that require the tape on the tape drive will result in the creation of a batch job. That creates an orderly sequence of tape mount requests to the system operator. All such batch jobs are scheduled on the SYS$TAPE batch queue. While being executed, the batch job will request the operator to mount the required tape. Then, the function requested by the user is performed.

Tape Librarian provides protection against erroneous initialization and unauthorized accessing of tapes. Tapes are automatically allocated to users from an available pool as they are requested and are then returned to that pool when no longer required. Several auxiliary utilities include Format, which allows for examining, copying, and converting a variety of nonstandard formats; BSS, which automatically schedules daily incremental backups; and Best-try-read, which attempts to read any tape and process labels if possible.

Full support is provided for multi-CPU configurations, either clusters or DECnetted.

Price: $3900
Contact: B. Mossberg
(213) 837–8339
INTERNATIONAL STRUCTURAL ENGINEERS, INC.
P.O. Box 241740
Los Angeles, CA 90024

TAPEREQUEST

Operating System: VMS
Keywords: • Disk utilities • File transfer • Operations

Distribution medium: magnetic tape.

This DCL program handles user requests for backups and restores. Users can request a backup to tape or a restore to disk for any files on the VAX system. The user or system operator can perform a backup/restore with TAPEREQUEST. A tape library is maintained, using the requestor's user name.

Defaults and wildcards are recognized by TAPEREQUEST.

TAPESERV automatically executes tape requests and may be run by the system manager. DECUS number VAX–67.

Price: $5 – $225
Contact: DECUS (see Introduction)

TAPESYS (Tape Management System for VAX/VMS)

Operating System: VMS
Keywords: • Operations • Query facilities • Security • Software utilities

TAPESYS manages a dynamic tape library in a VAX/VMS environment. Major system features include fully automatic daily system backup, screen-oriented support for end-user backup and restore, maintenance of a FIFO scratch pool, and controlled recycling of tapes. Users can allocate tapes from the scratch pool with simple DCL-like commands, change control fields in the tape record, request backups and restores at will, query the system for files, and save sets and reel numbers used in the past.

TAPESYS uses BACKUP, ensuring standard tape creation from one site to another. The system performs tape selection for all functions, eliminating operator error in writing over valuable tape volumes, and includes a flexible report writer. TAPESYS provides full security protection against users crossing over to other users' tapes and prevents unauthorized retrieval from unowned volumes.

TAPESYS includes an auditing feature, making available to the system manager a hard copy of the day's tape transactions. TAPESYS can automatically recreate all transactions up to the time of a data loss. The system tracks and accounts for all allocated tapes by tape-day units, for installations using chargeback.

TAPESYS works in a VAXcluster environment, granting users anywhere on the cluster limited access to a central data base. System and user backups are driven by TAPESYS on tape units designated by the manager as cluster drives. Full volume backups of disks on an HSC50 can be controlled off line by TAPESYS, according to a schedule designed by the manager.

TAPESYS performs as a file-archiving system on demand, enabling users to immediately remove files from directories for off-line storage on a holding tape. Files can be retrieved in minutes. TAPESYS can read/write EBCDIC tapes for transfer to mainframe sites.

Price: $3500 – $6500
Contact: Philip A. Jamieson
(617) 887–6409
SOFTWARE PARTNERS/32, INC.
68 Pinehurst Drive
Boxford, MA 01921

TLP (Tape Library Program)

Operating System: VMS
Keywords: • Data base management • Software utilities • Source code control

This system manages data about a magnetic tape library. The data file (TAPE$LIBRARY) contains information on ownership, access date, tape label, and membership in a volume set, if any, and provides 80 characters of user-writeable comment space for each reel to enable the owner to keep track of what is on each reel. The data file is created and manipulated by TAPELBR and accessed by MOUNT, INITIALIZE, and OK. All programs are designed as DCL foreign commands, such that only the owner of a given reel may INITIALIZE or MOUNT it. All sources are available, including a HELP library file. The TAPELBR program is approximately 90% VAX–11 FORTRAN and 10% MACRO–11 and is designed to be modified, with symbolic offsets defined for all parts of the data file and modular structured constructs used whenever possible.

Documentation is on magnetic media. DECUS number VAX–17.

Price: $5 – $225
Contact: DECUS (see Introduction)

TTI SORT

Operating System: VMS
Keywords: • Disk utilities • Software utilities

TTI SORT, developed by Touch Technologies, is 4 to 25 times faster than VAX–11 SORT/MERGE in CPU time and 3 to 20 times faster than VAX–11 SORT/MERGE in elapsed time. In addition, TTI SORT uses 50% to 60% less disk space, generates 80% fewer page faults, and uses 85% less direct I/O.

Price: $1295
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

Univault File Archiving System

Operating System: VMS
Keywords: • Disk utilities • File transfer • Security

Univault, developed by the University of Otago, archives users' files to tape storage and backs up an installation's volumes. As an archive system, Univault allows entire volumes, directories of files, and individual files to be saved on tape. Univault automatically chronicles only those files that have been updated or created since the last archival, saving time and tape manipulation. The system provides a data base of all archived files, allowing users to fully examine only their files. Users can delete files that are not immediately needed. When the files must be accessed, users can retrieve them rapidly and easily, saving considerable disk space.

As a backup utility, Univault saves all directory structures and files for each volume. Besides accruing savings in time over other backup systems, Univault provides the benefits of the file archival storage. The system creates duplicate tapes, facilitating off-site storage. Tape library maintenance procedures and checks, as well as overall ease of use and flexibility, attract system managers, operators, and end users. Discounts for multiple CPUs and sites are available.

Price: $3000 – $5000
Contact: John Mikle
(408) 395–0633
ENZED SYSTEMS
336A Village Lane
Los Gatos, CA 95030

UNIX*-Based Timesharing

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Accounting • Compilers • Education • Programming tools

Distribution medium: 9-track 800/1600 bpi magnetic tape.

Fargo offers timesharing on a VAX–11/750 running UNIX* Berkeley 4.2. Timesharing is offered on a month-to-month basis, allowing people to do development work on UNIX*. The following applications and tools are available: Curses, a terminal-independent screen package developed by Berkeley; the public domain Ingres relational data base; nroff word processing; troff phototypesetting, complete with phototypesetter; LISP for artificial intelligence; lex and yacc for compiler development; and accounting packages, including general ledger, job cost, accounts payable, accounts receivable, and sales lead tracking. The VAX has 800 megabytes of on-line disk storage.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $100 – $5000
Contact: Fred Potthoff
(612) 941–9470
FARGO ELECTRONIC SERVICES, INC.
7150 Shady Oak Road
Eden Prairie, MN 55344

Utilities

Operating System: VMS
Keywords: • Disk utilities • File transfer • Personal computing

FILELINK and DISKLINK, developed by Virtual Microsystems, Inc., can copy files to/from standard 8″ CP/M floppies, translate file formats to and from CP/M format, and read and write standard 8″ CP/M floppies from your minicomputer. FILELINK transfers files to your virtual floppies from your user area on the system disk or to your system disk from the virtual floppies. DISKLINK copies a standard 8″ CP/M distribution floppy read on RX01 or RX02 floppy disk drive to a virtual floppy. The virtual floppy appears as a single directory entry in your native operating system under a name you choose. DISKLINK also copies virtual floppies to physical floppies readable by CP/M microcomputers with 8″ drives.

THE BRIDGE™ is supplied with the two utilities running under your native operating system.

THE BRIDGE™ is a trademark of Virtual Microsystems, Inc.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

VDE (Viking Data Entry System)

Operating System: VMS
Keywords: • Data entry • Forms management
• Menu handlers • Programming tools

Distribution media: magnetic tape, RX01, RX02, RX50, TU58 DECtape II cartridge.

This complete data entry system for sequential files works with VFM (Viking Forms Manager) to capture and verify data. VDE uses the Viking Forms Manager to link user-created forms definition with a supplied key-to-disk system. VDE can create, update, verify, and examine files; insert, append, and delete records; and replace expensive key-to-disk machines. The system also allows variable-length records, contains a record content search facility, includes complete

operator production statistics, offers optional user exit routines that can be programmed in any language, and provides file navigation facilities.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $8000
Contact: John Haley
(918) 745–6550
VIKING SOFTWARE SERVICES
2800 Center Building/2815 E. Skelly Drive, Suite 816
Tulsa, OK 74105

VDM (Viking Data Manager)

Operating System: VMS
Keywords: • Data base management • Data entry • Forms management • Query facilities

Distribution media: magnetic tape, RX01, RX02, RX50, TU58 DECtape II cartridge.

This simple but complete method for production data entry and inquiry into keyed index sequential files allows users to create, update, verify, and inquire into ISAM files, which appear as formatted screens on CRT terminals. Data can be entered accurately and rapidly with VDM's data validation capability and special function keys. Menus and the interactive Viking Forms Painter (VFP) prompt the user and provide fill-in-blanks forms. VDM requires no programming for most applications; however, the optional user exit subroutines may be modified for complex requirements.

A version of this product is available for the PDP–11 computer.

Price: $3250 – $8500
Contact: John Haley
(918) 745–6550
VIKING SOFTWARE SERVICES
2800 Center Building/2815 E. Skelly Drive, Suite 816
Tulsa, OK 74105

Virtual/Logical Block I/O Utilities

Operating System: VMS
Keywords: • File transfer • Software utilities

Memory required: 3.5KB. Distribution medium: magnetic tape.

This collection of subroutines is used to perform block (unbuffered and unformatted) I/O to a disk or tape under VAX/VMS. The subroutines allow data throughput rates that equal SYS$QIOW but have a simpler calling format and convenient defaults. Additionally, since RMS block I/O mode is used internally, BIO has additional features, such as the ability to perform automatic file extensions and logical I/O to a foreign

device. The BIO subroutines are written in VAX–11 MACRO and conform to the VAX procedure calling standard. That should allow BIO routines to be called from any standard VAX/VMS language (FORTRAN, Pascal, MACRO, and so on). Included with BIO are a user's manual, installation guide, and help library. DECUS number VAX–60.

Price: $5 – $225
Contact: DECUS (see Introduction)

Virtual/Memory Disk

Operating System: VMS
Keywords: • Data conversion • Disk utilities • Programming tools

The VAX/VMS Virtual/Memory Disk, developed by Bear Computer Systems, Inc., is two products in one: a memory disk and a virtual disk. Both appear to users as an extra disk drive but actually use either virtual memory or space on an existing disk. The "extra" disk drive appears to be a normal physical disk to VAX/VMS utilities and user software. Multiple memory disks and virtual disks may be present in memory or on the same physical disk simultaneously.

The Virtual Disk allows a physical disk to be divided into multiple segments, each with its own disk initialization and mount characteristics for access-speed/storage optimization. The Virtual Disk can also be used to set "group" disk quotas. Thus, you may allocate an amount of storage to a particular department and allow the group to decide how best to utilize its disk space. A group of users can be made out of any set of VAX/VMS users and is not restricted to the VAX/VMS UIC definition of a group.

The Memory Disk eliminates seek time and disk arm contention, allows read/write operations to be performed at memory-transfer rates, and greatly accelerates disk-bound applications without any program modification.

Price: $2000
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

VMS and Fujitsu Micro-8 File Transfer Utility

Operating System: VMS
Keywords: • File transfer

Distribution medium: magnetic tape.

This utility transfers the text of a DSM routine file (in the routine directory of DSM), the value of a global variable with the global name and its subscript, the contents of a VMS ASCII file, the value of a local variable under the name of the local variable and its subscript (in the current DSM variable table), and the DSM routine (in the current DSM routine buffer).

Under the FTRAN, the FM8 system is used both as a principal terminal of VMS and as a BASIC system of FM8 by the interactive switching operation of the defined functions keys on FM8's keyboard. Then, by the FTRAN, FM8's screen editor becomes applicable to edit routines, value of local variables and global variables, and the contents of VMS files. DECUS number VAX–49.

Price: $5 – $225
Contact: DECUS (see Introduction)

VSELECT

Operating System: VMS
Keywords: • Programming tools • Software utilities
Distribution medium: 800/1600 bpi magnetic tape.

This record-extraction utility writes extracted records to an output file after optional modification by key field deletion, rearrangement, and/or transformation, by means of user-written VAX functions. VSELECT supports hooks for user-coded selection criteria and output field transformations, conditional field copying, the conditional generation of multiple output records from a single input record, the generation of backpointers into the input file(s) — including RFAs for RMS files — and the insertion of string literals in output records.

Input files contain fixed-size records; output records are fixed length. VSELECT may be used stand alone or called from any VAX native-mode languages that support the standard DIGITAL procedure-calling conventions.

A version of this product is available for the PDP–11 computer.

Price: $500 – $1500
Contact: Martha A. Scott
(617) 861–0670
EVANS GRIFFITHS & HART, INC.
55 Waltham Street
Lexington, MA 02173

VSORT (Very Fast Sort)

Operating System: VMS
Keywords: • Programming tools • Software utilities
Distribution medium: 800/1600 bpi magnetic tape.

This machine-language sort for VAX/VMS handles fixed-record-length relative, sequential, and ROSS/V files. The VSORT package contains a stand-alone version of the sort and two callable versions that may be linked with applications. One of the callable versions accepts several calls compatible with the VAX sort. VSORT is three to seven times as fast in CPU time as the VAX sort, uses significantly less disk work space, and for a given working set size, has fewer page faults and less direct and buffered I/O than the VAX sort.

A version of this product is available for the PDP–11 computer.

Price: $2500

Contact: Martha A. Scott
(617) 861–0670
EVANS GRIFFITHS & HART, INC.
55 Waltham Street
Lexington, MA 02173

XMODEM: File Transfer Program

Operating System: VMS

Keywords: • File transfer

Memory required: 30,000 bytes.

MODEM.FOR is a FORTRAN intercomputer file transfer program with checksums and error correction, using the Ward Christensen protocol equivalent to the CP/M program XMODEM 5.0. The program is compatible with the public domain CP/M program MODEM7 and its predecessors and successors running on various computers, as well as with many commercial microcomputer file transfer packages. Both binary and text file transfers are supported.

The program keeps a log file in the current or main directory for errors. XMODEM.FOR can be used for VAX-to-VAX file transfer, including executable and other binary files if the VAX version of MODEM7 is available or by using an intermediate microcomputer running a MODEM7-compatible program. DECUS number VAX–96.

Price: $5 – $225

Contact: DECUS (see Introduction)

XOREN IPL–11 (File Transfer Package)

Operating System: VMS

Keywords: • File transfer • Networking • Software utilities • Telecommunications

This package permits data or program files to be reliably transferred between any combination of the supported computers — PDP–11, LSI–11, VAX, and Professional — over an asynchronous link through direct or telephone lines. All versions also include a terminal emulation feature. For file transfer, each computer must be loaded with a licensed version of IPL–11 appropriate to its operating system. The two

computers can be any combination of models from the four ranges and may have different operating systems. Full communications error checking ensures error-free transfers.

Outside the United States and Canada, contact John Jarvis, Xoren Computing Ltd., 28 Maddox Street, London W1R 9PF, England (01) 629–5932.

A version of this product is available for the PDP–11 computer.

Price: $540 – $1080
Contact: Barbara Cepinco
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin, Suite 117
Orange, CA 92665

Financial Management

Camerique

1040 Tax System

Operating System: VMS
Keywords: • Financial analysis • Report writer • Taxes

The on-line multiple-terminal 1040 Tax System prepares federal income tax forms, related schedules, and selected state income tax routines. The features include preprinted or computer-generated forms and overlays, automatic pro forma generation, taxpayer systemizer, interview sheets corresponding to federal forms, complete diagnostics, transmittal letter, selected state tax routines (31 states), automatic taxpayer billing computation, multiple-terminal and remote-terminal operation, automatic update of state return from federal return, exclusive "password" security system, and fast retrieval of taxpayer interview, facilitating individual additions, corrections, and returns.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

ABC/Analyst

Operating System: MicroVMS, VMS
Keywords: • Financial analysis • Forecasting • Simulation • Statistics

Memory required: 120K minimum.

ABC/Analyst, written in FORTRAN, is easy to use for financial and statistical analysis, corporate modeling, and trend forecasting. The system has an open-ended ABC library data base and offers a large inventory of analytical subroutines; or, you can incorporate your own. Interfaces are provided to external IBM files, to data from the general ledger, and from company or econometric data bases. Financial analysis includes discounted cash flow, return on investment, present-value analysis, depreciation schedules, mortgages, loan repayment, compound interest, income tax, inflation, and adjustments. Modeling contains risks analysis using Monte Carlo techniques, goal seeking and backwards modeling, sensitivity analysis, and simultaneous equation modeling. Forecasting offers exponential smoothing, least-squares regression, polynomial regression, confidence limits, interpolation and extrapolation, simple and compound growth, lead/lag seasonal index, moving averages, and rolling forecasts. Statistical analysis consists of standard deviations and so forth, minimums/maximums, frequency distribution, random-numbers generation, and multiple regression. Plotting and bar graphs are available. Calculations include logic, tests, exponentiation, Boolean algebra, logarithms, and trigonometric

functions. Well-designed documentation makes ABC/Analyst usable by corporate and market planners, analysts, economists, and managers. Maintenance for the first year is free.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: V. W. Ruskin
(604) 682–3808
ABC MANAGEMENT SYSTEMS INC.
805 Dupont Street, Suite 3
Bellingham, WA 98225

ABC/Financial Planning, Modeling, and Reporting System

Operating System: MicroVMS, VMS
Keywords: • Cost accounting • Financial analysis • Financial planning • Forecasting

Memory required: 80K minimum.

This system, written in COBOL and FORTRAN, is easy to use for planning, modeling, budgeting, financial consolidations, forecasting, marketing and capital investment analysis, currency translation, profit planning, acquisition analysis, project and lease analysis, cost allocations, inflation accounting, and variance reporting. A user can add FORTRAN subroutines. Easy-to-use interfaces are provided to external files, data bases, and general ledger. ABC also has its own open-ended library data.

No programmer is needed, because ABC uses an ordinary sheet of accounting paper as input. ABC also provides a reporting and calculation capability that calculates variances from last year, forecasts a compound growth trend, or consolidates financial statements. Users can define and develop entire reporting systems. Maintenance for the first year is free.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: V. W. Ruskin
(604) 682–3808
ABC MANAGEMENT SYSTEMS INC.
805 Dupont Street, Suite 3
Bellingham, WA 98225

ACCESS Financial Systems

Operating System: VMS
Keywords: • Accounting • Banking • Information management

Distribution medium: 9-track 1600 bpi magnetic tape.

This complete in-house central information file system features easily installed parameters and menu-driven software modules, personal computer interfaces, and a report generator.

The system provides timely management information, government reporting information, consolidated interest reporting information, on-line central information files, daily processing, ongoing regulatory compliance, real-time file maintenance, interbank/intrabank messages, memo post capability, multibranch/multibank capability, multiple-level terminal-access security, in-depth account analysis, comprehensive training, aggressive conversion support, easy-to-read documentation, and high-speed MICR and central proof item capture for input from SCC reader sorter, IBM, NCR, and Burroughs proof equipment.

ACCESS also performs integrated general ledger with budget monitoring, loan participation management, and full accrual accounting. ACCESS also uses existing transaction codes and account numbers, produces common forms, prepares audit confirmation notices, and supports on-line ATM and teller terminal support.

A version of this product is available for the PDP–11 computer.

Price: $25,000 – $200,000
Contact: Steve Nau, President
(417) 881–5057
SPRINGFIELD COMPUTER CONSULTANTS, INC.
1949 East Sunshine, Suite 2–116
Springfield, MO 65804

Access Fund Accounting System

Operating System: VMS
Keywords: • Accounting • Cost accounting • Spreadsheets
Distribution media: magnetic tape, RL02.

The system, providing on-line interactive accounting for nonprofit organizations, includes multiple funding sources, interdepartmental billing, project cost allocation, an integrated electronic spreadsheet, color graphics, and the following subsystems: Personnel, Payroll, Accounts Payable, Cash Disbursements, Accounts Receivable, Cash Receipts, General Ledger, Project Management, Fixed Asset, Budgeting, and Revenue Forecasting.

Price: Available upon request
Contact: Charles Longfield
(617) 367–3690
ACCESS INTERNATIONAL, INC.
208 Union Wharf
Boston, MA 02109

Access Fund Raising System

Operating System: VMS
Keywords: • Fund raising

Distribution media: magnetic tape, RL02.

This interactive system for the management of fund-raising activities supports annual membership; pledge processing; special events; capital campaigns; planned giving; subscription; telemarketing; volunteers; prospect development and exchanges; statistical analysis of donors; word processing interface; individuals, corporations, and foundations; cash and noncash gifts; complete transaction history; cash forecasting; inquiry by number, name, and zip match code; electronic fund transfer; change cards; OCR; and gift giving.

Price: Available upon request
Contact: Charles Longfield
(617) 367–3690
ACCESS INTERNATIONAL, INC.
208 Union Wharf
Boston, MA 02109

Accounting

Operating System: VMS
Keywords: • Accounting • Audit • General ledger • Payroll

Distribution media: magnetic tape, RL02, RX01, RX50.

This collection of integrated business systems provides improved procedures, reduced paperwork, and timely information for later profitability. This flexible system meets the needs of a small company with a dedicated computer or a multidepartmental organization requiring simultaneous computer access from many locations. Features include extensive validation of input, comprehensive balancing and batch controls, audit trails, and immediate validation of general ledger; distribution accounts for all companies and/or organizational units; complete, automatic generation of journal entries for simplified interface with general accounting; simultaneous accommodation of multiple accounting periods, eliminating the need to close one period before proceeding to the next one; vouchers-paid history by vendor; ability to enter vouchers for standard vendors and 1-time vendors; and automatic determination of scheduled installment payment amounts and due dates.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $5000
Contact: E. Jackson Smith
(301) 296–9032
SMITH, ABBOTT, AND COMPANY, INC.
300 E. Joppa Road
Baltimore, MD 21204

ACUITY General Ledger

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS

Keywords: • Accounting • Financial analysis • General ledger • Report writer

ACUITY General Ledger, which can be interfaced to all other ACUITY systems, has a user-defined financial statement report generator, which allows the user to specify which accounts and formats the statement will include. The system maintains all detail so that financial reports can be produced for any time period during the year, not just monthly. A standard journal transaction can be generated automatically, or transactions can be entered through the general journal transaction program. Financial statements include profit and loss statement, balance sheet, supporting schedules, source and applications of funds, cash flow, and statement of working capital. If the ACUITY Project Management system is used, a project profit and loss statement is available.

Additional features include audit trail tracking by batch, the ability to track the last interface date from each of the other systems, and multiple company consolidation.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500

Contact: Sherrell Harper
(619) 474–2010
COMPUTER COGNITION
225 W. 30th Street
National City, CA 92050

ACUITY Purchase Order and Receiving System

Operating System: ULTRIX–32, UNIX* (System III, System V), VMS

Keywords: • Inventory • Materials handling • Project management • Purchasing

This system enables companies to issue computer-printed purchase orders, to track outstanding orders, to monitor supplier performance, and to ensure that delivery schedules are met.

Purchase orders in final form can be entered and left in the system until explicitly released by purchasing personnel. Order-by-order control of acknowledgments and confirmations is permitted. Complete integration between the ACUITY Inventory Management and Accounts Payable is provided; those systems are required. In addition, ACUITY Project Management system will receive commitment transactions from the Purchasing system to track subcontractor and materials costs for projects. Cost controls are implemented through automatic checking of ordered versus invoiced unit pricing, average pricing, total purchase order dollar volume, and other methods. Schedule receipts can be reported by project, by vendor, or by item.

Designed for companies ranging from 5 to 2000 employees, ACUITY Financial Software offers sophisticated audit trails, security by application and by user, local printer support, and TTY handler for Packet Switched Networks (such as TELENET). Computer Cognition supports end users with a 1-year warranty, with maintenance available thereafter. Installation, training, and customization are available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $9500

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225 W. 30th Street
National City, CA 92050

AMFACS

Operating System: VMS

Keywords: • Accounting • Financial analysis • General ledger

This interactive financial management system features user-defined accounting periods, journals, financial reports, and an on-line maintenance capability. Security is ensured with password protection for all key modules. Reporting capabilities include balance sheet, trial balance, general ledger, income statement, footnotes to financial statements, and a statement of retained earnings.

A version of this product is available for the PDP–11 computer.

Price: $3500 – $20,000

Contact: Marketing Department
(502) 491–9820 or 1–800–626–6268
AMCOR COMPUTER CORP.
1900 Plantside Drive
Louisville, KY 40299

AMS (Asset Management Client Reporting System)

Operating System: VMS
Keywords: • Financial analysis • General ledger • Investments

AMS is an on-line asset/portfolio investment management system with a fully integrated general ledger to facilitate effective management and full entity reporting (financial statements and investment review). The system performs five basic functions:

- Recording is done through the entry, processing, and posting of capital and income transactions.
- Control is provided by transaction and investment registers, cash statements, income-due reports, and inquiry routines. Every entry to the system produces a complete audit trail.
- Internal/external reporting is presented by investment summaries, income summary reports, transaction statements, and financial statements (balance sheet and income statement).
- Analysis is done on income statements with budget comparisons (year to date and current period), prior-year/period actuals comparison (also year to date and current period), investment registers drawing cost versus market value, indicated incomes, and yields by security.
- Cash management is accomplished by daily cash availability reports showing all entities' current cash balances.

A version of this product is available for the PDP–11 computer.

Price: $40,000 – $80,000
Contact: Tom Muskiluke
(519) 893–4200
DIGITAL BUSINESS COMPUTERS
133 Manitou Drive
Kitchener, Ontario N2C 1L4
Canada

APEX

Operating System: VMS
Keywords: • Banking • Credit • Retail

APEX processes applications for credit and new accounts and may be used by banks, retailers, or any other credit grantor who processes loan or credit card applications. The system takes each application from data entry through the decision process and generates the appropriate letters, reports, and actions.

The system can be used with or without an existing credit-scoring formula. Credit bureau reports are automatically received by the system through a dedicated phone line or an automatic-dialer modem. APEX can use your scoring formula to automatically analyze those reports.

Approved accounts can be "handed off" to your existing accounts receivable system in a user-specified record layout. Additionally, tapes can be generated for driving a credit card–embossing machine.

The user can monitor and track applications through each step of the process, altering or modifying the flow when necessary. Applications can be assigned special priorities when rapid expedition is required.

Technica will customize the software, if necessary, to perform, for example, debt burden or cash-flow analysis.

A version of this product is available for the PDP–11 computer.

Price: $65,000 – $120,000

Contact: Gregory Keyes, Sales Manager
(609) 987–2400
TECHNICA, INC.
3 Independence Way
Princeton, NJ 08540

APPGEN Professional Time Reporting

Operating System: UNIX* (Berkeley)

Keywords: • Billing • Project management • Report writer • Scheduling

This program provides the following:

- Reports for projected versus actual expenditures for projects and budget categories within each project
- Employee utilization information showing percentages of available versus charged time
- Project analysis of expenditures for various user-defined activity categories
- Tracking of charges to projects by hours and expense items
- Profitability reports on a project-by-project basis
- Maintenance and reporting of information relating to company costs, project charges, and client billings
- Screen display allowing immediate access to summary information for each project, including budgeted and actual labor and expenses

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $2500

Contact: Steve Thomas, Vice President, Marketing
(713) 974–2298 or (800) 231–0062
SOFTWARE EXPRESS
2925 Briarpark Boulevard, 7th Floor
Houston, TX 77042

ARCHON: FRS (Financial Reporting System)

Operating System: VMS
Keywords: • Accounting • Education • Financial analysis • Government

This generalized system of computer programs provides a sound financial reporting basis for educational institutions and other nonprofit organizations. FRS performs accepted accounting practices in accordance with models such as the Planned Program Budgeting System (PPBS), financial guidelines issued by the American Institute of Certified Public Accountants (AICPA), the National Association of Colleges and University Business Officers (NACUBO), and Handbook II, revised. FRS combines several standard accounting functions, such as budgetary expenditure and encumbrance accounting, revenue or income accounting, accounts payable processing, and general ledger, including financial reporting. Five-year budget versus actual financial data is maintained by the system and is available for analysis, using the extensive reporting capabilities of FRS and our data management system, QDMS. The payroll and personnel system (PAY) and the billing system (BILLS) are designed to interface with FRS.

A version of this product is available for the PDP–11 computer.

Price: $14,740
Contact: Ila Sunshine
(203) 728–6777
QUODATA CORP.
266 Pearl Street
Hartford, CT 06103

Banking — General Applications

Operating System: VMS
Keywords: • Banking • General ledger

Distribution media: magnetic tape, RK07, RL01, RL02.

This total, commercial on-line banking system processes checking accounts, savings, loans, certificates of deposit, daily statements, and general ledger. The system has spooling and complete daily backup procedures. The system interfaces to bank proof systems or, for smaller banks, has a batch-entry system. Features include:

- Full inquiry to all files
- Checking with ready reserve or plus checking, automatic transfers from savings, optional trial balance, complete OD and NSF advice print, automatic service charge, and profit-and-loss customer reporting
- A savings system with variable-interest calculation routines, demand statements, automatic transfer notices to checking, annual 1099 print, and all regular exception reporting
- A loan system that includes transaction history for inquiry display with the option of printing history ledgers

- A complete accrual along with call-statement reporting: interest projection report, aged delinquency, maturity tickler advice, and officer and bank-rate analysis along with yields
- Certificate of deposit processing with variable-interest formulas, multiple certificate holder recap, and variable-interest crediting
- Central file and asset/liability management

The system is excellent for banks $5M through $500M in deposits.

A version of this product is available for the PDP–11 computer.

Price: $20,000 – $30,000

Contact: R. Bud Brummer
(605) 343–7800
CUSTOM COMPUTER SERVICES, INC.
P.O. Box 1738
Rapid City, SD 57709

BankMaster

Operating System: VMS

Keywords: • Accounting • Banking • Decision support • Financial planning

BankMaster services make possible the integration of any financial intermediary's analytical efforts. Employing only one data base, drawn from existing financial systems to operate on a single system, BankMaster facilitates:

- Asset/liability management, including both static and dynamic gap measurements, separate liquidity and sensitivity analyses, and the ability to track the funding gap on a monthly, weekly, or daily basis
- Budgeting and profit forecasting with improved net-income accuracy and better control of operating performance
- Strategic planning, including what-if analyses and mixed-frequency forecasts ranging from daily to an unlimited time horizon
- Merger/acquisition analysis, including pooled interest accounting and net present value
- Capital budgeting with multifrequency cash flows, frequency-specific compounding, and multiple discount rates

BankMaster is available in house on DIGITAL and IBM mainframes or in time-shared form. Unlimited user-defined models are available for forecasting. For report writing, a variety of available reporting formats or the ability to generate design-customized reports is provided. A fully integrated graphics-writing package is an inherent part of the system.

This product is also available for $4000/mo.

Price: $30,000 – $130,000
Contact: David Gilbert
(617) 273–5500
STRATEGIC INFORMATION
80 Blanchard Road
Burlington, MA 01803

BANKPAK

Operating System: VMS
Keywords: • Banking • Credit • Information management • Real time

This commercial lending accounting system encompasses both borrowing instruments and underlying collateral. Borrowing can be accomplished through revolving loans, term loans, and rate options. Individual collateral items of accounts receivable, inventory, equipment, real estate, general, and unsecured can be separately priced with line limits, advance percentages, ineligibles, and interest rates. Collateral can be assigned specifically to one or more borrowing instruments or shared by all borrowings. Also, commitments that do not produce income, such as letters of credit, can be accounted for.

The on-line BANKPAK system is interactive, menu driven, and easy to use. All report selections can be displayed on a CRT or printed through a variety of printer options. The system is compatible with DATATRIEVE. All updating is immediate and allows backdating of all monetary transactions. BANKPAK includes complete audit controls and automatic recovery.

BANKPAK's interest accrual function includes many outstanding features, such as 360/365(6)-day calculation, maximum/minimum interest rates, nonmonthly interest billings, minimum interest amounts, commitment fees, float days, automatic deferral, and recapture of interest based on payment schedules and/or maximum rates. Automatic interest adjustments are calculated and billed, based on backdated transactions.

Bank participation is another feature that is fully integrated with the flexible offerings of BANKPAK. Blended or blind participations can be accommodated with automatic principal and interest settlements.

Price: $30,000 – $90,000
Contact: Francine Osenton, Vice President
(415) 348–0650
MCCUE SYSTEMS, INC.
330 Primrose Road, Suite 212
Burlingame, CA 94010

BankSearch

Operating System: VMS
Keywords: • Accounts payable • Banking • Data base management • Query facilities
Memory required: 1MB.

This information retrieval system for an automated payment system uses customizable data bases for S.W.I.F.T. and CHIPS messages, mail payment orders, FedWire, BankWire, cables, and Telex. BankSearch, written in Pascal, provides machine-processable identifiers, based on a name entry. BankSearch eliminates the time-consuming task of looking for identifiers in an account book or on a microfiche reader. The entered retrieval data can include foreign-language synonyms and proper-name abbreviations. Most spelling errors are corrected automatically.

The user-accessible screen allows tolerances to be changed for a broader or narrower search. The tolerances are used to calculate a closeness score for the records retrieved. The records with the highest score are displayed first. Words or phrases can be added, deleted, or updated in the dictionaries at user discretion. The dictionary consists of more than 30,000 words and phrases that retrieve information, including word and phrase synonyms, foreign words, and proper names.

Price: $75,000
Contact: Arthur Cacossa
(212) 425–0200
PRECISION BUSINESS SYSTEMS, LTD.
33 Rector Street
New York, NY 10006

BUDGET: A Bank Account Simulation Program

Operating System: VMS
Keywords: • Banking • Financial planning • Simulation
Memory required: 512KB.

This program models checking and savings accounts and produces a transaction record for both accounts, allowing credits and withdrawals. Provision is made for regular accesses to the accounts in daily, weekly, biweekly, bimonthly, monthly, quarterly, semiannual, and annual intervals, as well as 1-time accesses. Items may be classified as necessity and luxury, and the transaction may or may not take place as scheduled, based on its priority. Transactions can have a variable float, which simulates the period between a due date and past-due date. Tables are generated with user-defined labels for clarity. A list of expenses by category and a list of luxury items are also produced. DECUS number VAX–109.

Price: $5 – $225
Contact: DECUS (see Introduction)

Business Information System

Operating System: VMS
Keywords: • Accounting • Financial analysis • General ledger • Payroll

This integrated financial package performs payroll, accounts receivable and billing, accounts payable, and general ledger functions. The system also prints financial statements. The system is applicable to organizations in the $3 million to $30 million range.

The system uses interactive processing. Operation can be local or through telephone communications. Personnel with no prior computer experience or training can use the system. English-language prompts are used exclusively.

The system provides an integrated data base for both financial and operations data. Reports with key management information on productivity, costs per unit, and other performance measures can be provided. The data base and software are available in single- and multiuser versions and can accommodate various kinds of growth. The system offers multicompany processing and automatic verification of data base integrity.

Custom-designed financial statements can be changed with no programming. Financial statements can include operations data as well as conventional financial information.

A high level of continuing maintenance and support is available, along with custom tailoring and other special software. Options are a report writer, to provide user-designed nonstandard reports, as well as integrated job cost accounting, order entry, and purchase order processing.

A version of this product is available for the PDP–11 computer.

Price: $9000 +
Contact: Janna McMillan
(617) 275–5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

Business Modeler

Operating System: VMS
Keywords: • Accounting • Calculation aids • Office systems • Spreadsheets

Memory required: 32K.

This electronic spreadsheet program runs on all PDP–11, VAX, and Professional-Series computers and is written in MACRO.

Business Modeler uses a worksheet format of up to 255 × 255 cells. The screen can be set to either 80 or 132 columns wide and acts as a window on the worksheet, allowing an area 16 rows deep and up to 62 columns wide. The screen can be split into as many as four sections. On-line help is available. Several built-in functions are available, such as MAXIMUM/MINIMUM/AVERAGE of a list, SUM/COUNT of items in a list, LOOK–UP/CHOOSE from a table, LOGIC expressions, and TRIGONOMETRIC expressions. You can add to those functions with user-installable functions, such as compound interest, performance ratios, or other complex mathematical formulas.

Values can be stored in either single or double precision and displayed in various formats, such as accounting format or European numeric format. Worksheets can be stored in the computer, consolidated, be password protected, and stored in formats suitable for later editing or word processing.

Graphics is also available in the package at no additional cost.

A version of this product is available for the PDP–11 computer.

Price: $650 – $2500

Contact: Kevin Vroman
(212) 608–5310
LOGSYS (USA) INC.
116 John Street, Suite 1408
New York, NY 10038

C–CALC

Operating System: MicroVMS, VMS

Keywords:
- Financial planning
- Forecasting
- Materials handling
- Spreadsheets

Distribution media: diskette, hard disk, magnetic tape.

C–CALC is a menu-driven multidimensional forecasting, planning, data analysis, and modeling package with an interactive help facility and an on-line training procedure. Menus and single-level English-like editor commands aid the inexperienced user. The advanced C–CALC user can use the optional shortcuts to bypass menus and prompts.

C–CALC contains a data importing/exporting facility and worksheet-consolidation feature to use in computer networks and workstations. Entire worksheets or raw data can easily be transferred between computer systems. In addition, worksheet data is transportable between C–CALC and most other applications programs: graphics, word processing systems, general ledger, and so forth.

In addition to the standard spreadsheet features, C–CALC offers a 736 × 600 matrix worksheet area, generates boardroom-quality reports by means of stored print menus, sorts alphabetically or numerically, accesses data on other worksheets, consolidates like or unlike

worksheets or portions of worksheets, identifies labels and titles, automates repetitive operations through user-defined procedures, conditionally formats, and offers if-then-else abilities and built-in mathematical, statistical, financial, and logical functions.

Expanded user-defined procedures allow C–CALC to become a programming language. Training, data entry routines, and program interfaces can easily be tailored to a multiuser environment.

A version of this product is available for the PDP–11 computer.

Price: $595 – $3750
Contact: Gerald Solomon
(206) 822–2252
DSD CORP.
10420 N.E. 37th Circle, Suite A
Kirkland, WA 98033

CALC–11/CALC–11 PLUS

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V), VMS
Keywords: • Decision support • Financial analysis • Financial planning • Spreadsheets

This 3-dimensional electronic spreadsheet uses English commands. The maximum spreadsheet size is 32,767 rows by 32,767 columns, and an unlimited number of spreadsheets can be consolidated. File encryption, individual size column widths, 132-character display, and ASCII file interfacing are just a few of the features that make this system so versatile. The spreadsheet may be transferred and used across all the operating systems and hardware configurations. A 1-year warranty that includes telephone support on a toll-free number and software updates at a media charge only are included with the purchase price. Source code is also available.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $750 – $2500
Contact: Chuck Reed
(317) 872–7200
COMPUTER SYSTEMS CORP.
5540 Rock Hampton Court
Indianapolis, IN 46268

CALC (Accounting Calculator), Version II

Operating System: VMS
Keywords: • Accounting • Mathematics • Office systems • Report writer

Distribution medium: magnetic tape.

This multifunctioned accounting calculator is designed to operate on the VT1xx- and VT2xx-series terminals. CALC, featuring on-line help, provides the basic functions of a desk-top calculator, using the keyboard's auxiliary keypad and a screen display that simulates a strip of paper. Additional features include hard-copy printout, constants, and accessible memory registers. The system has additional functions allowing the CRT to operate as if it were four calculators (strips). Those strips can be compared for validation of long sequences of entries.

Demonstration tapes and user manuals can be purchased to preview the functioning of the product. A user installation/instruction guide is included.

A version of this product is available for the PDP–11 computer.

Price: $250

Contact: Neal J. Anderson, Senior Product Specialist
(414) 784–8250
MCHUGH, FREEMAN AND ASSOCIATES, INC.
1135 Legion Drive, P.O. Box 454
Elm Grove, WI 53122

Capital Items Accounting

Operating System: VMS

Keywords: • Financial planning • Fixed assets • Scheduling

Distribution media: disk, magnetic tape.

This system allows scheduling of assets and liabilities and provides complete, automatic audit trails and supporting schedules on both tax- and book-basis depreciation/amortization. Up to one trillion assets and liabilities can be stored on this interactive, multiuser, on-line system, which is integrated with other Landmark systems.

Price: Available upon request

Contact: Carol Ryan, Marketing Director
(201) 722–5100
LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

CATS (Contribution/Accounting Tracking System)

Operating System: VMS

Keywords: • Accounting • Financial planning • Fund raising • Word processing

This specialized program for nonprofit organizations provides complete accounting functions that not only aid administration by producing management reports but also increase income contributions through the unique interaction of accounting and word processing. The program's contribution tracking provides donor statements by individual, zip code, or total membership; pledge reminders; instant donor

account inquiry with printout; label printing in alpha or zip order; donor lists with names and addresses in alphabetical or zip code order; and daily/weekly posting of contributions.

CATS provides membership services, such as a biographic file that tracks member birth dates, family data, blood type, committee status, music interest, sports interest, leadership interests, and activities involvement; label sorting and printing, using membership data; sorting and printing of customized reports detailing membership data; sorting and interfacing with word processing for personalized mailings; and printing of membership rosters. In addition, the program offers general accounting that will record income and expense disbursements and receipts; record monthly and year-to-date data; generate a balance sheet, a profit/loss statement, and an actual general ledger; generate accounts payable with automatic check writing; prepare accounts receivable with invoice and statement production; and provide payroll with automatic check writing and W–2 forms production.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $20,000
Contact: William R. Paschal, Jr.
(405) 843–7323
DATATEK CORP.
818 N.W. 63rd
Oklahoma City, OK 73116

CDIS Modeling and Forecasting

Operating System: VMS
Keywords: • Accounting • Forecasting • Manufacturing • Statistics

Memory Required: 1MB.

CDIS Modeling and Forecasting, written in COBOL II, features CDIS General Ledger integration, electronic spreadsheet capability, modeling and advanced statistical routines, macro command utilities, and row-to-column, horizontal, vertical, between-models, and multidimension relationships. Other features include multiple planning scenarios, a simple command language, hundreds of modeling routines, unlimited reports with definable report formats, on-line inquiry, interactive or batch capabilities, help options, and first- and second-order exponential smoothing routines.

Price: $16,500
Contact: Roy E. Mann, President
(818) 991–4060
COMPUTER DATA INFORMATION SYSTEMS
31344 Via Colinas
Westlake Village, CA 91362–3912

Class Payroll

Operating System: VMS
Keywords: • Accounting • Payroll
Distribution medium: magnetic tape.

This system, written in VAX BASIC, supports user-definable pay periods, thus allowing for multiple paydays. The system handles automatic or manual advances and reissues checks after a check run has been completed. Labor-distribution reporting provides informative labor cost analysis by job within a department. Class Payroll also includes burden allocation to reflect true payroll costs. The system monitors the anniversary dates of employees and, based on their length of service, can automatically accrue a higher rate of holiday pay. Class Payroll reports up to five taxable benefit codes on an employee's T4. The system promotes a pay-code table and generates statistical reports. The multiple-bank account feature provides reconciliation to numerous bank accounts.

Designed and written in Canada, this application provides a complete understanding of Canadian laws and regulations while adhering to provincial legislation.

Price: $15,000 – $25,000
Contact: Patricia Boittiaux
(403) 236–6126
CANALTA
7100 44th Street, S.E.
Calgary, Alberta T2H 1X2
Canada

Collection-Plus

Operating System: VMS
Keywords: • Banking • Credit

Collection-Plus, designed to increase profitability by optimizing the operations of a collection department, can be used by any organization with more than four collection employees. Prime beneficiaries include medical, financial, government, and utilities organizations.

Each collector has a workstation where accounts are presented in order of importance to management. A scheduling program determines those priorities on a daily basis from a list of 64 debtor attributes, including balance, days outstanding, days since last payment or contract, presence or absence of assets, missed or met promises, and so on. The collector is not involved in that scheduling and merely requests the next account on the list. Up to 16 dunning letters (in four languages) can be automatically sent by the scheduler in presort zip code order.

Management can easily change the scheduling criteria. Reports provide the collection rate of individual letters and collector efficiency. Support for a color graphics terminal reveals useful statistical trends. Full accounting and legal processing are included.

The program features unlimited debtor history available in three keystrokes. Accounts are presented to the collector by management criteria. Letters and calls in response to previous debtor activity versus batch processing can be accommodated. Debtors can be matched and linked, thus providing an on-line paperless data base environment. New business can be entered from tape or keyboard. The menu-driven design is very easy to use and learn. Use of the program can triple employee efficiency and yield a 25% increase in collection rate.

A version of this product is available for the PDP–11 computer.

Price: $20,000 – $50,000
Contact: Jodd Readick
(212) 595–8800
INT'L COMPUTER COLLECTIONS, INC.
Box 443 Ansonia Station
New York, NY 10023

Commercial Loan System

Operating System: ULTRIX–32
Keywords: • Banking • Financial analysis

This system makes data processing a tool for the user and good business for your customers. The Commercial Loan System is written in RM COBOL with alternate keys to enable the user to find loans from just the customer's name. The system tracks past-due loans by loan officer. Other features include payment history file, customer loan reconciliation, monthly revenue reporting, daily transaction listing, and payment-due notices.

A version of this product is available for the PDP–11 computer.

Price: $1250
Contact: Bob Ginn
(901) 767–3759
INDUSTRY SOFTWARE SALES, INC.
P.O. Box 240804
Memphis, TN 38124

COUNT®/IFS (Integrated Financial System)

Operating System: VMS
Keywords: • Accounting • Decision support • Financial analysis • Financial planning

This comprehensive financial management and control package allows managers to collect and analyze business information. The powerful decision support system provides timely and easily accessible financial data.

The package allows the performance of standard business applications and the creation of a custom system tailored to specific needs. Some features are budget developing and reporting, accounts payable and cash disbursements, accounts receivable tracking, general ledger accounting, cash-flow analysis, financial modeling, payroll processing, timekeeping, and project, ad hoc, and labor cost reporting.

The following modules are available:

- ADM (Accounting Data Management)
- A/P (Interactive Accounts Payable)
- Spread Financial Modeling Language
- Payroll with Labor Distribution
- Job Cost

The CIFS installation may consist of one or more of those modules. The modules have a built-in interface to enable detailed or summary data to be collected and processed by one application before being passed to another.

Price: $39,000

Contact: Jenny McCoy
(703) 790–1700
L&L SOFTWARE, INC.
8200 Greensboro Drive, Suite 200
McLean, VA 22102

CUFFS–88

Operating System: VMS

Keywords: • Decision support • Financial analysis • Financial planning

This integrated corporate planning environment for the VAX and DECSYSTEM–20 is used by financial planners for corporate budgets, consolidations, project finance, and building vertical applications. CUFFS–88 is easy to use and features menus, help, prompting for needed inputs, English-like commands, data validity checking, detailed error messages, and automatic file handling. Additional features are:

- Modeling Language provides nonprocedural modeling, which enables a user to write that part of the model with English-like equations; and procedural modeling, which handles parts of a model that require step-by-step calculations. Both techniques can be used together even when inside simultaneous equations.
- Hierarchical Planning Data Base contains models, data, and reports specifications and performs rolling budgets, multiview consolidation, allocation, and currency conversion.
- *N*-Dimensional Report Generator enables users to print any combination of selected data dimensions, such as corporate entities, accounts, and time, onto the three paper dimensions of rows, columns, and pages.

Price: $25,000 – $42,000
Contact: Sandra Kirkendall
(212) 534–6404
CUFFS PLANNING & MODELS, LTD.
201 E. 87th, Suite 26C
New York, NY 10128

Data*Model Spreadsheet Management System

Operating System: VMS
Keywords: • Decision support • Financial analysis • Simulation • Spreadsheets

Data*Model performs consolidated budgeting, variance analysis, profit and cash planning, investment analysis, manpower planning, asset/liability management, liquidity analysis, currency conversion, and many other planning and analysis applications. Data*Model is ideal for any tedious, time-consuming task that would otherwise be done by hand with spreadsheets.

Data*Model's computerized spreadsheets may contain up to 30,000 rows and 500 columns. Built-in routines include amortization, depreciation, IROR, NPV, loss carryforward, and goal seeking. Complete if/then logic allows users to build decisions into their models. Unlimited numbers and levels of consolidation may be performed. Model-development time and storage requirements are minimized because spreadsheets, data, logic, and report formats can be shared by many models.

A built-in file interface routine allows Data*Model to interface with other systems, such as word processing, graphics, and accounting systems, without custom programming.

A version of this product is available for the PDP–11 computer.

Price: $995 – $3000
Contact: Tom Hanks
(206) 282–9777
COMPUTER MODELING, INC.
P.O. Box 19595
Seattle, WA 98109

DataCalc

Operating System: VMS
Keywords: • Decision support • Forecasting • Simulation • Spreadsheets

Distribution media: RL02, RX01, RX02, RX50, magnetic tape.

This system for managers, financial analysts, executives, budget officers, and accountants turns DIGITAL business computers into the personal tool needed by business professionals. Your VT100, VT220, VT52, or compatible terminal becomes a window through which you view a portion of your spreadsheet and manipulate numbers. DataCalc

lets you play what-ifs. If, for example, you hired a new employee, what would be the effect on productivity, sales, payroll, balance sheet, and net income?

With calculation and storage routines written in VAX native-mode assembly, DataCalc is one of the fastest electronic spreadsheets available. Since DataCalc is transportable, spreadsheets designed in the field office can be sent to the home office to be analyzed, revised, or consolidated.

DataCalc features help text throughout, individual column widths, batch processor, floating decimal, commas every three digits, file protection, weighted average, 12-digit accuracy, sort, 80/132 column display, 3-dimensional display, blank on zero, loan payment, cell protection, continuous labels, table lookup, and more.

Integrated with A-to-Z, DataCalc is a decision maker's most important tool.

A version of this product is available for the PDP–11 computer.

Price: $495 – $1795

Contact: Jon L. Vanderwood
(801) 487–0531
DATATREND
395 Ironwood Drive
Salt Lake City, UT 84115

DECalc

Operating System: MicroVMS, VMS

Keywords: • Accounting • Financial analysis • Spreadsheets

Distribution media: 9-track 1600 bpi magnetic tape, RC25, RK07, RL02, RX50.

VAX DECalc is an interactive applications package for creating, editing, and manipulating the electronic equivalent of an accountant's spreadsheet. VAX DECalc executes in native mode under VAX/VMS and MicroVMS operating systems and drives a VT100- or VT200-series terminal. VAX DECalc is self-teaching, and users need little previous computer experience.

The VAX DECalc spreadsheet consists of a rectangular grid. The maximum theoretical size of the grid is 63 columns by 254 rows; the practical limit, however, depends on available memory and/or storage space. VAX DECalc allows multiple grids to be stored and retrieved, but users can access only one grid at a time.

VAX DECalc also provides commands for grid manipulation. During command input, the user is prompted for any options or suboptions. The user can stop at any point prior to completing entry of the command, leaving the grid unchanged.

The key features of VAX DECalc are its integration capabilities. VAX DECalc can be used with VAX DECgraph; spreadsheet data is loaded from VAX DECalc into VAX DECgraph to be manipulated and plotted as desired. VAX DECalc also integrates with appropriate DCL command language, a user-selected mail facility, a text editor, and DATATRIEVE (for retrieval only).

Refer to SPD #25.79.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $680 – $5100
Contact: Consult your local DIGITAL sales office (see Introduction).

Decision Tree

Operating System: Independent
Keywords: • Banking • Credit • Decision support • Retail

Decision Tree is an entirely new way of evaluating applicants for credit. This system creates a set of criteria, embracing both qualitative and quantitative attributes of applicants for credit, that determines the applicants who are likely to become "good" accounts and those who are likely to become "bad" accounts.

In a typical engagement, Technica's analytical staff selects a sample of applicants from the client's data base, prepares the data, produces the Decision Tree analysis, defines portfolio performance tradeoffs available to the client, consults with the client's data processing staff about implementation of the system, and trains the client's operating staff in the use of the system. The result is a system that increases new-account approvals, reduces bad debts, and improves efficiency.

A version of this product is available for the PDP–11 computer.

Price: $33,500 – $66,000
Contact: Gregory Keyes, Sales Manager
(609) 987–2400
TECHNICA, INC.
3 Independence Way
Princeton, NJ 08540

DIGICALC™

Operating System: VMS
Keywords: • Accounting • Financial analysis • Mathematics • Spreadsheets

Distribution media: 800/1600 bpi magnetic tape, RX50.

This professional-strength, virtual-memory electronic spreadsheet for financial/mathematical analysis combines the strengths of traditional financial modeling packages with the flexibility of the popular microcomputer CALC programs. DIGICALC's more than 8000 users include accountants, managers, engineers, executives, and scientists. Features include variable column widths and up to 616 columns by 616

rows and 999 consolidations, with no limitations on the use of constants, text, or equations. DIGICALC allows for up to 112 characters a cell position and boardroom-quality report generation. Annual support provides newsletter subscription, telephone problem response, new-feature updates, and new-product discounts.

A version of this product is available for the PDP–11 computer.

Price: $275 – $6000

Contact: Wayne Yarnall
(206) 881–2331
WHY SYSTEMS, INC.
16902 Redmond Way
Redmond, WA 98052

EMPIRE®

Operating System: VMS

Keywords: • Decision support • Financial analysis • Graphics • Report writer

Distribution medium: 9-track 1600 bpi magnetic tape.

The EMPIRE decision support system facilitates financial modeling, analysis, and reporting. EMPIRE features a procedural modeling language that allows the user to define a problem as a column-and-row matrix (spreadsheet); a function library for finding financial, mathematical, and statistical values such as depreciation, rate of return, present value, loan payments, amortization, compounding, payback, averages, minimums, maximums, growth rates, and simple regression; a data manager for entering and saving data, inquiries, and consolidations; a report writer for customized documents; a graphics facility for any black-and-white, color, or hard-copy graphics; interactive assumption analysis, including what-if sensitivity, target value (goal seeking), and impact analysis; risk analysis, in the form of Monte Carlo simulation; and data analysis and forecasting methods, including simple regression, multiple regression, exponential smoothing, moving averages, seasonal analysis, and ARIMA (Box-Jenkins) analysis.

In addition, the system provides computer-based instructions for on-line help and teaching aids; sorting within a report; user-controlled screen formatting and model-building tools; support for weighting, missing values, and correlation-matrix display; and support for calculating depreciation, using the ACRS method.

DIGITAL distributes this software product under license from Applied Data Research Inc.

Refer to SPD #A1.59.xx when requesting further information on this product from your local DIGITAL sales office.

EMPIRE® is a registered trademark of Applied Data Research Inc.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

EPVS — Portfolio Management System

Operating System: VMS
Keywords: • Accounting • Decision support • Information management • Investments

This integrated portfolio-management, information/control family of software products is designed for any size investment-management firm, bank trust department, or corporate sponsor. This in-house system offers unparalleled security and ease of use, handling trust accounting, decision making, and policy implementation. EPVS provides a superb record-keeping and accounting system and enhances employees' efficiency, productivity, and creativity.

The EPVS modules include full audit-trail record keeping and accounting; a trust accounting system (taxable and nontaxable trusts, with and without custody); automated order and trading systems; asset valuation and automated pricing; commission tracking; BAI rate-of-return analysis; DTC reconciliation; custom-tailored portfolio appraisals and ledger statements for client reporting; client billing statement preparation and tracking; and file transferral to microcomputer workstations.

Price: $40,000 – $150,000
Contact: Milton C. Weiler, Jr.
(617) 542–6181
COMPUTER AIDED DECISIONS, INC.
31 Milk Street
Boston, MA 02109

FAAS (Fixed Asset Accounting System)

Operating System: VMS
Keywords: • Accounting • Property management • Purchasing

This interactive asset management and depreciation system includes assets tracking to seven levels of location, with optional transfer journaling. Up to six sets of accounting and tax books may be maintained, with separate depreciation information for each. Complete descriptive information is maintained for each asset. Reporting is extensive and includes property lists and reconciliation, transfer, acquisition, retirement, and depreciation expense reports.

More than 10 depreciation methods are supported, including ACRS. Monthly financial book depreciation expense journal entries are passed to the White Hat General Ledger System.

Price: Available upon request
Contact: Linda M. Dobias
(617) 933–3780
WHITE HAT SYSTEMS, INC.
331 Montvale Avenue
Woburn, MA 01801

FACS — Patronage Accounting

Operating System: VMS
Keywords: • General ledger • Purchasing • Report writer • Taxes

Designed to be used by either tax-exempt or nonexempt cooperatives, this package can be combined with FACS Inventory and the other FACS accounting modules to provide a complete financial management system. The system features direct interface with the FACS G/L; patronage allocations, including tax credit allocations, based on the quantity or dollar value of sales; allocation to departments on an individual department basis, allowing separate multiplier factors (percentage of basis to pay); user-defined minimum check calculation; purchase credits; federal tax withholding and reporting; and up to 26 stock classifications and up to 255 individual departments.

Reporting features include sales reports and summaries by department, customer type, general ledger account, and so on; general ledger posting summaries; user-defined patron name/address report and a patron's ledger; user-defined prior-year retainage and stock reporting; allocation and dividend registers; and form 1099s. All reports can be printed to the screen or to a hard-copy device.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Steven L. Buth
(509) 624–4248
SPOKANE COMPUTER SERVICES, INC.
West 915 Second Avenue
Spokane, WA 99204

FASTRAN

Operating System: VMS
Keywords: • Accounts payable • Banking • Telecommunications

FASTRAN automates funds transfer and wire-room processing for financial institutions. The system includes interfaces to FEDWIRE, BANKWIRE, CHIPS, SWIFT, Telex, and TWX. The functions are communications, message routing, test wording, risk control, payment processing, and advice generation.

A version of this product is available for the PDP–11 computer.

Price: $50,000 – $100,000
Contact: Richard C. Thurber, Vice President, Finance Systems
(212) 943–4575
LOGICA INC.
20 Exchange Place
New York, NY 10005

FCS–EPS

Operating System: VMS
Keywords: • Data base management • Decision support • Financial analysis

FCS–EPS, a sophisticated yet easy-to-use, integrated decision support system, is often used to model financial scenarios. The command-driven system uses REPORT, CALCULATE, and GRAPH instructions. The modules perform report generation, what-if analysis, hierarchical consolidation, multidimensional consolidation, risk anaylsis, statistical analysis, high-resolution graphics, screen manipulation of data, and data base management. More than 160 financial functions required for budgeting and forecasting applications are offered. FCS–EPS runs under a variety of hardware and operating systems ranging from large mainframe computers to recently introduced microcomputers.

A version of this product is available for the PDP–11 computer.

Price: $25,000 – $82,000
Contact: Susan Donovan
(603) 898–1800
EVALUATION AND PLANNING SYSTEMS
One Industrial Drive
Windham, NH 03087

Final

Operating System: VMS
Keywords: • Data entry • Decision support • Financial analysis • Simulation

This multidimensional financial analysis and modeling system features intermatrix arithmetic for easy consolidation; interactive data entry and viewing for different perspectives on your data; multiple dimensions to give real modeling ability; data definition to shape your model to your needs; an unlimited data base size for large and detailed models; an editor to develop and save your logic and arithmetic; menus that you write; the ability to be used on 8- and 16-bit micro, mini, and mainframe computers; separate printing and report formatting facilities; and the ability to transfer data and logic from external systems.

A version of this product is available for the PDP–11 computer.

Price: £3500 – £8400
Contact: G. Norman
(0734) 699777
D. M. ENGLAND & PARTNERS LTD.
Lytham Court, Lytham Road
Woodley, Reading
Berkshire RG5 3PQ
England

Financial Planning

Operating System: VMS
Keywords: • Financial planning • Fixed assets • Forecasting • Spreadsheets
Distribution media: disk, magnetic tape.

This sophisticated system with complete what-if capabilities helps managers with or without data processing experience in their decision making and planning. Dollar figures, percentages, or relative weights can be used in spreadsheet analysis, budgeting, forecasting, projections, and modeling. Budgets and forecasts may be sent to the general ledger. Other features include depreciation, amortization, projected tax savings, and construction loan projections. Unlimited history is allowed, and a flexible reporting system permits the user to design and format reports.

Price: Available upon request
Contact: Carol Ryan, Marketing Director
(201) 722–5100
LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

Financial Reporting

Operating System: VMS
Keywords: • Report writer • Text management
Distribution media: disk, magnetic tape.

This interactive system enables users to design and print reports without interrupting data entry. The user can report on one entity or a consolidation of entities, display the accounts/subaccounts on the report, and select the date range for each column or for the entire report. The user can then show each line of detail, summarize the report, or do a combination of both. For formatting reports, users can show chart-of-account numbers or just the account descriptions, show decimal places or just dollar figures, insert commas, summarize each figure to the nearest thousand, delete lines with zero value, print headings on every page, and determine the number of spaces between columns.

This multiuser on-line system is integrated with other Landmark systems.

Price: Available upon request
Contact: Carol Ryan, Marketing Director
(201) 722–5100
LANDMARK SOFTWARE SYSTEMS, INC.
155 W. Main Street
Somerville, NJ 08876

FINAR (Financial Analysis and Reporting System)

Operating System: VMS
Keywords: • Financial analysis • Financial planning • Simulation • Spreadsheets

This financial modeling system for business professionals performs financial analysis and planning. FINAR is as simple to use as an electronic spreadsheet yet contains many advanced features. FINAR automates budgets that maintain detail at cost center level, then consolidates the detail to several levels for reporting and analysis. FINAR includes the standard financial functions, such as discounted cash flow, net present value, the full range of depreciation routines, internal rate of return, and so on. Data may be accessed from an existing data base or another model. FINAR includes an on-line tutor that includes 10 learning sessions. Telephone support is available.

A version of this product is available for the PDP–11 computer.

Price: $995 – $9800
Contact: Jim Hotze
(713) 664–1172
FINAR SYSTEMS LTD.
6101 Southwest Freeway, Suite 406
Houston, TX 77057

FINESSE

Operating System: VMS
Keywords: • Accounting • Decision support • Forecasting • Simulation

Memory required: 32K.

This menu-based, fully interactive forecasting system, written in FORTRAN, runs much more quickly than other compatible systems. Once built, FINESSE models can be queried to look at the implications of changes in interest rates, currency rates, raw-material cost, forecasts, and so forth. FINESSE also performs routine accounting functions, such as budgeting, balance sheet preparation, consolidation, variance reporting, profit and loss sheets, investment analysis, and tax calculations. Additional features include a flexible report generator, graphical displays, multiple consolidations, an interface to other systems, sensitivity analysis, target analysis, and automatic progressing of results.

A version of this product is available for the PDP–11 computer.

Price: £6500
Contact: Rod Pugh
(+44) 78434411
P–E INFORMATION SYSTEMS LTD.
Park House, Wick Road
Egham, Surrey TW20 0HW
United Kingdom

Finipulator

Operating System: VMS
Keywords: • Calculation aids • Financial analysis • Spreadsheets

Distribution media: magnetic tape, RL02.

This spreadsheet system features the following menu-selectable functions: compound-interest calculations; amortization and depreciation schedules; annuity calculations, including present value and future value; and variable cash-flow analysis. The user supplies only the parameters to be used.

Finipulator also provides a report writer for customized reports and an interface to RIS General Ledger. Finipulator is written in VAX COBOL and can be further tailored to user requirements.

Price: $2000 – $10,000
Contact: David L. Ley
(313) 855–6181
RADLEY BUSINESS COMPUTERS
7071 Orchard Lake Road, Suite 305
W. Bloomfield, MI 48033

FINPRO (Financial Projection Model)

Operating System: VMS
Keywords: • Financial analysis • Financial planning • Simulation

FINPRO predicts balance sheet and profit-and-loss data for up to 12 planning periods into the future. A period can be a week, a month, a quarter, or some other length of time. For example, the model can be used to project the following profit- and loss-related numbers: gross profit, net profit, operating expenses, administrative expenses, and interest expense and income. The following balance sheet items can be projected: cash balances, borrowing requirements, accounts receivable, and accounts payable.

The model can project profits, cash flow, and cash requirements data necessary for loans; project sales, inventory, and labor requirements for meeting a goal of, for example, a 20% increase in profits over last year; and project sales required for breakeven, 10% gross profit, and

30% gross profit, respectively. FINPRO can also evaluate the impact of different pricing strategies on profitability; and evaluate the impact on cash requirements of reducing the average age of accounts receivable.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: Stephen Hoiberg
(617) 275–5810
BREUER & CO.
54 Middlesex Turnpike
Bedford, MA 01730

FINSYS–IMPRS Financial System

Operating System: VMS
Keywords: • Financial analysis • General ledger • Report writer

This menu-driven, password-protected system accommodates monthly, quarterly, and other reporting periods and features user-defined and controlled financial reporting; input documents for data entry; account maintenance designed into the menus; detail entries available on a year-to-date basis, extensive validation of account numbers, hash totals, and "limit tests"; immediate input validation; user ability to suppress any/all financial statement reports; automatic interface to other major systems (A/P, P/R, and so on); and instant access to detail or accounts.

The system also incorporates a variety of income statements, suppresses zero dollar amounts, underlines total amounts, reestablishes new-year balance on demand, automatically adjusts previous-month changes to year-to-date totals, allows unlimited chart of accounts and alphanumeric account numbers, distributes single G/L accounts to multiple financial lines, and accommodates company division/department breakdowns.

A version of this product is available for the PDP–11 computer.

Price: $3000
Contact: Elvin E. Smith or Forrest E. Weddle
(913) 782–8544
RUF CORP.
1533 E. Spruce
Olathe, KS 66061

FLOWCalc

Operating System: VMS
Keywords: • Financial analysis • Financial planning • Information management • Spreadsheets

FLOWCalc, developed by The Software Workshop — General Research, is a spreadsheet simulator. The program is efficient in VAX CPU use and disk storage.

FLOWCalc runs on almost any cursor-addressable terminal. On the VT100, you can enter most commands with just one or two keystrokes on the keypad. FLOWCalc provides an extensive on-line help facility and extensive documentation, with a tutorial for the beginning user.

In addition to the usual spreadsheet functions, FLOWCalc provides worksheet encryption, up to four windows, variable individual column widths, several cell formats, delete, insert, move, copy of entire or partial cell, rows, columns, and blocks of cells. FLOWCalc also allows you to label cells and blocks of cells.

Other advanced features include sorting of rows or columns, read and write of ASCII files, command file execution, user-defined functions, and several mathematical, logical, and operational functions and string matching.

Price: $3500
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

FS–II (Futures Administration System)

Operating System: VMS
Keywords: • Accounting • Banking • Information management • Investments

This interactive system automates the accounting and record keeping of commercial hedgers. FS–II provides fast and accurate processing of information concerning brokerage equity, original and variation margins, open and liquidated positions, cash movements, trades, and other information for hedge management. FS–II provides management with internal control by valuing the entire futures and options portfolio and producing a full set of reports at the end of the same trading day. FS–II is used by the money center banks and other large financial institutions.

Price: $45,000 – $250,000
Contact: Joseph E. Brown
(212) 227–8880
THE YARDLEY GROUP, INC.
40 Rector Street
New York, NY 10005

GENESYS

Operating System: Independent
Keywords: • Banking • Credit • Retail

GENESYS is designed to provide the benefits of modern credit evaluation methods to credit grantors who cannot develop an empirically based system. If you have very few accounts, are entering a new market, or have little or no available data on past applicants or account performance, GENESYS provides an individually tailored powerful hybrid of judgmental and empirical systems at a reasonable cost.

A version of this product is available for the PDP–11 computer.

Price: $17,500 – $29,500
Contact: Gregory Keyes, Sales Manager
(609) 987–2400
TECHNICA, INC.
3 Independence Way
Princeton, NJ 08540

Graphic Outlook

Operating System: VMS
Keywords: • Graphics • Mathematics • Spreadsheets

Integrating graphics and text processing into an advanced electronic spreadsheet, Graphic Outlook provides high-resolution graphics on most modern graphics terminals, such as ReGIS and Tektronix. Horizontal and vertical bar charts are drawn, as well as pie charts and line plots. A low-resolution graphics module draws bar and line charts on VT100-type terminals.

Text processing is accomplished by entering an editor or word processing system from the spreadsheet program. You can build or edit reports of any size to include in your spreadsheets.

Graphic Outlook links spreadsheets for a 3-D capability. Some of the more than 70 built-in functions carry out date arithmetic and perform scheduling.

The program reads and writes ASCII files for interface to other applications and data bases. Journaling prevents loss of data. The SPAWN command places into execution other processes that drive printers or plotters or that compute values for the spreadsheet. Command files can be set up that perform goal searching.

The program provides windows, titles, cell editing, user-defined functions, sort, search, cell macros, extensive on-line help, and distributed tutorials.

Price: $2950 – $6950
Contact: Ray Stone
(805) 964–9101
STONE MOUNTAIN COMPUTING CORP.
1096 Cambridge Drive
Santa Barbara, CA 93111

IBMS (Interactive Business Management System)

Operating System: VMS
Keywords: • Accounting • Management • Query facilities

IBMS provides the educational financial manager with an easy-to-use, comprehensive, and flexible tool to maintain and access the company's financial information. IBMS offers management control, adaptability, and functionality. IBMS uses state-of-the-art design, complete on-line inquiry, and powerful report writers.

IBMS has seven fully integrated subsystems that can operate independently or in conjunction with other subsystems: general ledger, accounts payable, accounts receivable, security, budget, purchase order entry, and inventory control. IBMS offers installation and training, warranty, enhancements, customer support, documentation, and consulting services.

Price: Available upon request
Contact: Dennis Charles
(603) 883–3212
THE FASBE GROUP
P.O. Box G
Nashua, NH 03061

IDSS (Interactive Decision Support System)

Operating System: VMS
Keywords: • Decision support • Financial analysis • Financial planning • Spreadsheets

This financial planning software for budget preparation, cash-flow management, investment studies, strategic planning, and merger/acquisition analysis is for managers and financial analysts without computer expertise. IDSS handles a range of business problems, from simple spreadsheets to complex multinational business planning situations involving dozens of scenarios.

IDSS features include English-like language, instant error detection, an integrated data dictionary and data base, a full-screen data input facility, a built-in text editor, an on-line help facility, a fully flexible report writer, a hierarchical consolidation capability, multiple model logics, an extensive library of mathematical and financial calculation functions, what-if analysis, sensitivity and goal-seeking functions, business color graphics, and interface with external files and data bases.

Price: $20,000 – $40,000
Contact: Ray Talwar
(416) 491–4231
MPS GROUP INC.
201 Consumers Road, Suite 201
Willowdale, Ontario M2J 4G8
Canada

Insider Trading Monitor

Operating System: VMS
Keywords: • Banking • Financial planning • Insurance • Investments

This on-line data base contains trading information on all open market sales, purchases, and option exercises of stocks by corporate officers, directors, and insiders. Users can retrieve information on companies, industrial groups, or individuals. With each sale or purchase, the insider's name, trading date, number of shares, price, and number of shares held are listed. Data on more than 6500 companies and holdings of more than 50,000 officers is contained and updated continuously.

Insider activity is ranked by companies and industrial groups. A cross-reference allows users to see an insider's or a company's holdings.

Data can be supplied on a daily, weekly, or monthly basis from the SEC filings. Information on the 2400+ companies listed on the Toronto Exchange is also available.

The software is compatible with RMS and DATATRIEVE.

Price: $10,000 – $30,000
Contact: John H. Wright
(305) 652–1710
FLORIDA COMPUTER, INC.
99 N.W. 183rd Street
North Miami, FL 33169

InterFad™

Operating System: VAX DSM, VMS
Keywords: • Financial analysis • Query facilities • Report writer • Taxes

This complete on-line interactive depreciation and fixed-asset system may be interfaced with the InterGL General Ledger and Financial Reporting System or used in a stand-alone environment. InterFad can handle any of eight depreciation methods and includes the ACRS laws. The system's options include expensing or not depreciating an asset, defining fiscal periods, and depreciating an asset on any time period (monthly, quarterly, annually, and so on). The system can simultaneously keep track of two sets of records for each asset — one for IRS tax purposes and the other for book purposes.

Assets can be grouped or kept separate. You define asset locations and general ledger and expense accounts. When an asset is depreciated, the accounts are updated automatically, and a complete history report is produced on the desired assets, breaking down the depreciation for a given period of time and showing both IRS and book depreciation.

The system handles investment tax credit and recapture functions. Your investment tax credit is automatically calculated. If you sell an asset, the recapture amount is produced on a report, which is available at any time. Also available is an on-line inquiry function enabling you to check the status and book value of any asset and to show the amount of past depreciation, as well as information about the asset, including salvage value, date purchased, purchase price, investment tax credit amount, useful life, location, method, and G/L and expense account numbers.

Upon request, you can produce reports available in different forms. The reports include an asset-acquisition report, a depreciation report by location, an investment tax credit and recapture report, and a report showing any changes made on an asset. The ability to project future amounts of depreciation allows you to see how much your assets would depreciate each year by using any of the eight methods of computing depreciation and for any useful life and purchase value.

A version of this product is available for the PDP–11 computer.

Price: $2500

Contact: Alexander J. Phillips, President
(201) 256–7633
INTERACTIVE SYSTEMS AND MANAGEMENT CORP.
1500 Cardinal Drive
Little Falls, NJ 07424

INTRST.PKG

Operating System: VMS

Keywords: • Banking • Calculation aids • Decision support

This package helps banks, credit unions, and savings and loans calculate interest rates. INTRST.PKG, written in Pascal, calculates cost of funds and interest rates on both commercial and amortized notes. The program is designed to protect against usury law suits involving interest rates and to aid in setting loan rates.

A version of this product is available for the PDP–11 computer.

Price: $400

Contact: David M. Carson
(816) 931–7610
SOFTFIN
P.O. Box 3354
Kansas City, KS 66103

InvestMaster

Operating System: VMS

Keywords: • Banking • Data base management
• Financial analysis • Investments

InvestMaster facilitates cross-search and cross-reference on a variety of data bases simultaneously and automatically and can combine data from both internal and external sources. Because InvestMaster generates its own programs, an analyst with no programming knowledge can program the system to satisfy customized analytical and report-writing needs. After the user fills in forms on the screen, InvestMaster automatically writes the new computer program that fulfills the stated requirement.

Combining data from multiple sources is a cumbersome task for microcomputer users. InvestMaster facilitates the integration and delivery of data from multiple large data bases in order to use fundamental, technical, and internal proprietary data in a single microcomputer application.

Price: Available upon request
Contact: Kenneth Jeffers, Vice President, Investment Marketing
(617) 273–5500 or (800) 227–1209
STRATEGIC INFORMATION
80 Blanchard Road
Burlington, MA 01803

LPS (Loan Processing System)

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Banking • Credit

This complete, stand-alone system for loan processing serves mortgage bankers and savings and loan associations. The system includes mortgage loan application entry, processing, and tracking. Interface with credit bureau offices is supported, and certain loan-servicing interfaces are available. Loan closing reports, document preparation, and historical reporting of loan applications are parts of the system. LPS was developed for use with the Informix™ data base management system. Many types of loans are supported. The report writer includes advanced features and allows the system to be modified easily.

The system is very fast. A loan application with all supporting documentation can be calculated and printed in less than 30 minutes. A loan closing can be prepared and printed in less than 10 minutes. All pipeline and closed loan information is available for reporting at any time.

* UNIX is a trademark of AT&T Bell Laboratories. Informix™ is a trademark of Relational Database Systems, Inc.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $24,000
Contact: Dan A. Lundy
(405) 324–6324
WALLUN DATA PROCESSING
211F South 4th Street
Yukon, OK 73099

Price: $5000 – $24,000
Contact: Dan A. Lundy
(405) 324–6324
WALLUN DATA PROCESSING
211F South 4th Street
Yukon, OK 73099

MAPS/MODEL

Operating System: VMS
Keywords: • Decision support • Financial analysis • Financial planning • Spreadsheets

MAPS/MODEL combines the flexibility of electronic spreadsheets and the power of advanced modeling languages. MAPS/MODEL is ideal for problems involving multidimensional consolidations, iteration, or sensitivity analysis. Models are easily constructed for applications such as budgeting, cash flow management, and forecasting. MAPS/GRAPH, integrated with MAPS/MODEL, allows you to use your financial planning data for presentation-quality color graphics.

A version of this product is available for the PDP–11 computer.

Price: $12,000 – $25,000
Contact: Kevin Walsh
(415) 856–1100
ROSS SYSTEMS, INC.
1860 Embarcadero Road
Palo Alto, CA 94303

MATHEASY

Operating System: VMS
Keywords: • Banking • Credit • Retail

MATHEASY processes applications for credit and new accounts and can be used by banks, retailers, or any other credit grantor that processes loan or credit card applications. The system takes each application from data entry through the decision process and generates the appropriate letters, reports, and actions.

The system can be used with or without an existing credit scoring formula. Credit bureau reports are automatically received by the system through a dedicated phone line or an automatic-dialer modem. MATHEASY can use your scoring formula to automatically analyze those reports.

Approved accounts can be "handed off" to your existing accounts receivable system in a user-specified record layout. Additionally, tapes can be generated for driving a credit card embossing machine.

The user can monitor and track applications through each step of the process, altering or modifying the flow when necessary. Applications can be assigned special priorities when rapid expedition is required.

MATHTECH will customize the software, if necessary, to perform, for example, debt burden or cash flow analysis.

A version of this product is available for the PDP–11 computer.

Price: $65,000 – $110,000
Contact: Steven Mutschler, Director, Credit Systems
(609) 799–2600
MATHTECH, INC.
P.O. Box 2393
Princeton, NJ 08540

MENTOR — Data Analysis and Modeling

Operating System: VMS
Keywords: • Data base management • Financial analysis • Report writer • Spreadsheets

This comprehensive and flexible on-line data analysis modeling package, designed for use by both large and small companies, exceeds common spreadsheet packages in functionality, data-handling capabilities, and ease of use. Unlike other stand-alone products, MENTOR becomes an integral part of a company's management information system environment.

MENTOR offers several methods of transferring information between models developed at various company levels. A "join" function permits 3-dimensional viewing of models, allowing a manager to join data from several departments or divisions into a desired presentation while at the same time maintaining the department's or division's unique presentations. Similarly, special MENTOR functions permit multilevel budget preparation and consolidation.

MENTOR enables the user to control formats. The user can create models to his or her specific requirements. The data used to build those models can then be used to produce special reports. That is accomplished through an interactive report writer that can produce different reports from specified selection criteria of a model.

MENTOR's ability to transfer files to and from other systems eliminates rekeying of data and permits the creation of models that are integrated elements of the information system rather than mere stand-alone structures. MENTOR thus gives the user immediate access to, control over, and analysis of company data.

Price: Available upon request
Contact: Gary M. Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

Mergers and Acquisitions Corporate Ownership Associates

Operating System: VMS
Keywords: • Banking • Financial planning • Insurance • Investments

This historical data base of all Williams Act Filings required by the Securities and Exchange Commission includes 13D filings, which report the ownership of 5% or more of a class of stock; a tender offer statement (14D–1) and (14D–9); and other filings. Data includes the name of the issuer or filer, the type of filing, the number of shares held by the filer, the percentage of stock owned, background on the filings, the nature of the transaction, and additional data elements. Data can be updated through high-speed communication links, tapes, or diskettes on a daily, weekly, or monthly basis.

When combined with Insider Trading Information (forms 3 and 4), an accurate holdings picture is obtained of both insiders and outsiders.

The software allows searching and is compatible with the RMS file structure and DATATRIEVE.

Price: $15,000 – $40,000
Contact: John H. Wright
(305) 652–1710
FLORIDA COMPUTER, INC.
99 N.W. 183rd Street
North Miami, FL 33169

Micro Modeler

Operating System: VMS
Keywords: • Financial analysis • Financial planning

Micro Modeler is a powerful, flexible, yet easy-to-use business planning, control, and reporting tool. Micro Modeler's economical price-to-power ratio can provide the basis for all corporate, financial, and information systems used in the day-to-day planning and monitoring of business performance.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Christina O'Brien
(01) 740 5758
INTELLIGENCE (UK) PLC
Network House, Wood Lane
London W12
England

MODEL™

Operating System: VMS
Keywords: • Decision support • Financial analysis • Programming tools • Simulation

This interactive, upwardly compatible planning, modeling, and analysis tool was developed for the nonprogramming businessperson. This decision support system provides an English-like language to address applications such as budgeting, product planning, cash flow analysis, merger/acquisition studies, and project financing. The system, with separately priced modules, meets initial application requirements. Additional modules may be purchased as needed.

MODEL's features include hierarchical consolidation with a data manager, what-if analysis, prewritten routines (math, financial, forecasting, statistical, and more), goal seeking, optimization and risk analysis, simultaneous equation solving, PERT/CPM project scheduling, plotting, a built-in editor, an on-line help facility, and more. MODEL provides multiple matrix modeling, alpha data, and the user-defined vocabulary option, which allows MODEL to be easily modified to run in any language.

MODEL can generate applications that can run without the modeling language resident on the computer. MODEL generates self-contained object code, which is transportable to other compatible machines. MODEL also develops interactive menu-driven applications, permitting the use of decision support for users who wish to build their own models or to use this decision support system only through menus and prompts.

Price: $9000 – $150,000
Contact: Ruth Archer
(214) 233–4549
LLOYD BUSH SOFTWARE PRODUCTS
14679 Midway Road, Suite 100
Dallas, TX 75234

Moneyman

Operating System: VMS
Keywords: • Decision support • Financial analysis • Forecasting • Spreadsheets

Memory required: 2MB.

This system tracks the actual, budget, and forecasting data of large and/or complex organizations. The system operates in an on-line, real-time, multiuser environment. Users can participate in budgeting, forecasting, comparative analysis, and reporting. The data base is password protected, and the user manager has full control over who has access to data. Data can be rolled up through each level of the organization, giving each group its own summary to work with. The rollup logic allows design for any type of organization.

The system has unlimited spreadsheets or matrixes with different formats and reserved areas for statistical data, special totaling, and storage for calculation and temporary line structures.

Moneyman's more than 100 commands can be used for data manipulation, analysis, or as part of a report writer command file to produce printed or on-line reports. A report writer command file created for one reporting level can be used for other levels.

Data enters the system automatically by the Autopost Utility, which extracts activity from the general ledger or other designated source and posts the data to the proper area of the matrix. Data can also be entered, using individual commands.

The system allows the user to create, store, and maintain up to two years of budget, three years of forecast, and the current year of actual. Previous-year actual can also be accessed for comparative reporting.

Moneyman has an on-line help file that is automatically invoked when an incorrect command is entered. The system is delivered on VAX-compatible tape with comprehensive user and system documentation. The purchase price includes 24 hours of install/training time. Comprehensive classroom training is available at the customer site. The programs are written in VAX–11 BASIC. A maintenance contract is available.

Price: $35,000 – $75,000

Contact: Dan Sullivan
(617) 851–4301
ADVANCED MANAGEMENT SERVICES INC.
Main Street, P.O. Box 254
Wakefield, MA 01880

Multiplan® Electronic Worksheet

Operating System: ULTRIX–32, VMS

Keywords: • Decision support • Financial planning • Sales and marketing • Spreadsheets

This highly visual, easy-to-use, interactive electronic worksheet aids in financial planning and modeling for business or personal needs. The worksheet can be used to predict future financial needs and profitability by answering the user's what-if questions. Multiplan can also be used to perform iteration and sensitivity analysis to indicate a step-by-step approach to a targeting result. Multiplan is menu driven, uses natural-language commands, and has a thorough help facility. Maximum worksheet size is 63 columns by 255 rows. By using the UNIX* TERMCAP capability, Multiplan supports most cursor-addressable terminals. The worksheet is backed by SCO's comprehensive software warranty product support services.

Multiplan® is a registered trademark of Microsoft, Inc.

A version of this product is available for the PDP–11 computer.

Price: $495 – $2000
Contact: Lee Tyler
(408) 425–7222
THE SANTA CRUZ OPERATION, INC.
500 Chestnut Street
Santa Cruz, CA 95060

NYPLAN

Operating System: VMS
Keywords: • Financial analysis • Graphics • Report writer • Spreadsheets

This electronic spreadsheet and financial planning system combines the convenient interaction of a screen-oriented calc package with the power of financial modeling. Ranging from comprehensive reporting to graphics analysis, NYPLAN provides financial statements, budgets, sales forecasts, pro forma financial statements, consolidated reports, and manpower charts.

NYPLAN supports both a hard-copy terminal mode and a special screen mode on most popular terminals. With the screen mode, any model can be entered and instantaneously displayed. The user can create the model in screen or hard-copy mode and alternate between models.

Graphs can be produced on video displays, printers, and plotters. Line charts and bar charts are available and can be produced in either two or three dimensions.

NYPLAN also includes a data base interface for receiving data from other files, a report writer, and an on-line user's manual. The statistics package contains linear regression and risk analysis, and the financial package includes internal rate of return, present value, discounted cash flow, and depreciation. NYPLAN uses standard math rules, including exponentiation and parentheses. Models can be made to prompt for necessary information, and a job stream can be made, instructing NYPLAN to perform a series of events.

A version of this product is available for the PDP–11 computer.

Price: $9500 – $15,500
Contact: John Enyedy
(408) 257–7700
NATIONAL INFORMATION SYSTEMS
20370 Town Center Lane
Cupertino, CA 95014

OPTICALC

Operating System: VMS
Keywords: • Spreadsheets

This program generates a spreadsheet 63 columns by 254 rows. The program contains 130 built-in functions covering accounting, calendar manipulations, financial, logical, mathematical, and statistical applications. Formulas may be entered in regular algebraic or reverse Polish notation in any spreadsheet cell. Spreadsheet input is from ASCII files, Data-Interchange Format (DIF) files, keyboard, or the system's existing spreadsheets. The program has 24 formats. An entry position can have a local format for display or print, and the spreadsheet can have up to two global formats for display or print. The formats include four ways to display money.

The program lets you lock row and column labels. You may create two windows that can be moved independently or synchronously on the sheet. OPTICALC also provides spreadsheet security. A sort feature allows the program to be sorted in ASCII, calendar, or dictionary order, in ascending or descending order. The program can be run in batch mode or interactively.

Price: $3500 – $4500
Contact: John McLean
(713) 871–9134
JOHN MCLEAN AND ASSOCIATES
P.O. Box 270507
Houston, TX 77277

OPTICALC, Jr.

Operating System: VMS
Keywords: • Spreadsheets

The 16,002 entry positions in OPTICALC, Jr., allow a choice of algebraic or reverse Polish notation, the ability to read ASCII or Software Arts' DIF files, 12 formats, and locked titles. Other features include value referencing, spreadsheet rearrangement, and independent display windows. Each row and column intersection (entry position) in the 63-column by 254-row spreadsheet can hold up to 190 characters or a number with as many decimal places as the host computer system allows. Formulas can contain numbers, entry position coordinates, operators, and function names. For coordinate entries, called value references, the formula uses the current numerical value of the referenced coordinate, which permits what-if calculations. The program contains 25 built-in functions, covering accounting, calendar manipulation, financial, and mathematical applications. The output spreadsheet is upward-compatible with other OPTI products. Any entry position can have a local format for display or print, and the spreadsheet can have up to two global formats for display or print. Printouts can be values only and have the same global and local formats, global and local column widths, and title locking as the display. This system supports DIGITAL, Direct, HP, Lear Siegler, and TeleVideo terminals.

Price: $1000
Contact: John McLean
(713) 871–9134
JOHN MCLEAN AND ASSOCIATES
P.O. Box 270507
Houston, TX 77277

OPTIQUBE

Operating System: VMS
Keywords: • Decision support • Financial analysis • Financial planning • Spreadsheets

This program provides the electronic spreadsheet features of OPTICALC, as well as on-line or batch-mode access for up to 63 spreadsheets at one time and the ability to read ASCII report files from the user's data base or accounting programs. OPTIQUBE can search tabular data spread over 63 spreadsheets and update source spreadsheets. The master spreadsheet can be used alone or as a source sheet for other master spreadsheets. The QUBE command controls linkage between source spreadsheets and master spreadsheets and supports DIGITAL, Direct, HP, Lear Siegler, and TeleVideo terminals.

Price: $6000
Contact: John McLean
(713) 871–9134
JOHN MCLEAN AND ASSOCIATES
P.O. Box 270507
Houston, TX 77277

PAX

Operating System: VMS
Keywords: • Banking • Financial planning • Investments • Taxes

This comprehensive system for the administration of defined contribution pension and profit-sharing plans, including 401 (k) and ESOPs, can accommodate trustee or participant-directed investment options with complete subaccounting for up to 99 choices. A consolidated allocation report can be produced with individual participant statements. This fully integrated system has built-in audit trails and query facilities.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $12,000
Contact: Susan M. Peterman
(202) 363–5300
STANLEY E. CLARKE AND ASSOCIATES, INC.
4801 Massachusetts Avenue, N.W.
Washington, DC 20016

Performance Manager

Operating System: Independent
Keywords: • Banking • Credit • Decision support • Retail

This system manages the performance of established accounts, provides management directives, and improves profitability. Performance Manager is developed from an analysis of your accounts receivable master file data tapes. That data is analyzed to identify the behavior patterns of accounts that are most predictive of delinquency and writeoff.

This integrated credit management decision system, organized in simple tabular format, provides clear-cut guidelines for setting credit lines dynamically as information becomes available regarding an account's charging and paying behavior, determining authorization limits, and managing delinquent accounts, including collection prioritization.

A version of this product is available for the PDP–11 computer.

Price: $50,000 – $70,000
Contact: Gregory Keyes, Sales Manager
(609) 987–2400
TECHNICA, INC.
3 Independence Way
Princeton, NJ 08540

Plan 4

Operating System: VMS
Keywords: • Financial analysis • Financial planning • Forecasting • Spreadsheets

This user-friendly and menu-driven planning and modeling package features modeling, budgeting, and financial analysis. The package includes a 3-dimensional spreadsheet, a report writer, financial models, and built-in routines that provide net present value and return-on-investment calculations and that produce plots and histograms.

Price: $3000
Contact: F. Ciacci
(416) 475–5155
SYSTEM DYNAMICS CORP.
151 Esna Park Drive
Markham, Ontario L3R 3B1
Canada

PLANFAX Actuarial System

Operating System: ULTRIX–32, VMS
Keywords: • Insurance • Personnel

This turnkey system serves the administration of defined benefit pension, profit sharing, thrift, defined contribution pension, target, stock bonus, and ESOP-type employee benefit plans. PLANFAX routinely handles 401(K) multifund accounts and contains TEFRA, DEFRA, and REACT code.

The system may be operated as a single-user system or as a multiuser system, permitting local and remote users. The system is menu driven but allows the user to write individual programs.

PLANFAX may be configured for up to 128 users. Programming knowledge is not necessary. A special environment is not required for the hardware systems of up to 16 users.

The system handles most plans, including small, large, insured, and noninsured plans. The administrative system tracks plans and provides an activity log and scheduling. Extensive plan parameters, actuarial tables, and data bases are included.

The system produces 8½″ × 11″ or 14⅞″ × 11″ reports, including turnkey client reports. The system can evaluate 100 lives, using decrement costing, and can produce reports in two minutes. A benefit calculator allows automated termination/retirement calculations and options.

PLANFAX includes a data base system, a defined contribution system, and a defined benefit system under the basic product license agreement.

A version of this product is available for the PDP–11 computer.

Price: $10,500 – $17,500
Contact: Charles W. Leggette
(214) 528–8850
ACTUARIAL MANAGEMENT SERVICES, INC.
4809 Cole Avenue, Suite 350
Dallas, TX 75205

POM/T (Purchase Order Management/Tendering System)

Operating System: VMS
Keywords: • Inventory • Order entry

This financial and administrative package is designed for colleges, universities, school boards, municipalities, and paragovernmental agencies. POM/T features purchase order creation, stock and nonstock purchase orders, receiving, stock file maintenance, tendering, and automatic accruals.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $30,000 (Canadian)
Contact: Dennis J. Sakamoto
(416) 433–2100
S.R.B. INTERNATIONAL LTD.
Whitby Corporate Centre,
209 Dundas Street E., Suite 205
Whitby, Ontario L1N 7H8
Canada

Portfolio Management/THESIS™

Operating System: VMS
Keywords: • Banking • Financial analysis • Financial planning • Information management

KOCH offers a variety of sophisticated and thorough securities-trading packages designed for the corporate portfolio manager. Banks, insurance companies, pension plans, trusts, and corporations that manage their own portfolios and those of their clients will find these packages well suited to their environment. Each package will interface easily with existing general ledger, tax reporting (Form 1099), and client billing systems. All packages run on most computer systems, support black-and-white or color terminals and printers, include extensive ad hoc report-writing facilities, and are designed and written in proven and fully supported state-of-the-art software technology.

Bond Trading is an on-line package that supports coupon and discount securities; government, corporate, and municipal bonds; management for an unlimited number of portfolios; yields, discounts, durations, accretions, amortizations, 360/365 basis comparisons; and countless other calculations and projections. The package handles coupon notification, service fee billing, 1099, and G/L postings. Full back-office accounting functions as well as support for traders' decision making are included.

The Futures and Hedges package provides complete accounting and valuation for futures and cash and futures hedges.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Brad Marcus
(415) 567–0400
KOCH SYSTEMS CORP.
P.O. Box 2510
San Francisco, CA 94126

Programs for the Technical Analysis of Time Series

Operating System: VMS
Keywords: • Financial analysis • Forecasting • Statistics

These three programs, written in BASIC, model financial and economic time series through pattern-recognition decision rules. The system includes a unique and extensive weekly financial markets data base, beginning in 1861. The data base includes foreign exchange rates, nonferrous metals prices, interest rates, stock market indexes, and components of the consolidated Federal Reserve–Treasury condition statement.

- The time series analysis program includes 35 built-in functions for smoothing time series, characterizing trends, and providing utility functions for columns of time series data in a matrix format. The program provides for customized report writing and what-if analysis.
- The performance-evaluation program provides transaction-by-transaction reports and trading summary reports from the transaction data file.
- The edit math program provides for data entry, correction, and a mathematical manipulation of time series data.

Price: $400 – $4000
Contact: Ted C. Earle
(602) 624–6364
MARKET TIMING REPORT
P.O. Box 224
Tucson, AZ 85745

P.R.O.S.E.

Operating System: VMS
Keywords: • Data base management • Decision support • Investments • Report writer

This relational financial data base management system for investment professionals provides an integrated portfolio management and investment research of equity securities. P.R.O.S.E. can contain more than 40,000 items for each of 15,000 companies. The integrated design allows fast assimilation of data into one report, even though the data is stored and accessed in separate components.

The modular programs are comprised of five integrated systems that allow the user to screen, monitor, evaluate, and select investment opportunities:

- The Financial Database System allows the client to choose from the following commercially available data bases: daily securities pricing, corporate fundamentals, earnings estimates, securities valuation, and the client's own data base.
- The Investment Data Processor is the analytical system of P.R.O.S.E. The commanding capabilities retrieve and manipulate data in different data bases as though the data were one library of information. Functions include screening, sorting, reporting, decile analysis, industry groupings, portfolio optimization, data base dictionary reporting, percentage portfolio allocation, and merging portfolios into the analytical system.

- The Portfolio Management System integrates with the Investment Data Processor to produce management reports on general holdings, classification, diversification reports, market value, portfolio characteristics, security price performance reports, and full transactions analysis.
- The Portfolio Performance Measurement System allows the client to compare his/her portfolio's performance with any of the stock indexes, such as Standard & Poor's 500 or Dow Jones Industrial Averages.
- The General Financial Reporting System allows the client to produce formatted traditional reports, such as balance sheets, income statements, sources and use statements, as well as history of earnings or prices. The user can define the format and, using the fully integrated programming of P.R.O.S.E., produce a customized report.

P.R.O.S.E. uses an in-house minicomputer to store, access, research, and manipulate more than 600 million data items. The system combines security analysis and portfolio management tools with research capabilities and is easy to learn and use.

Price: $45,000 – $115,000

Contact: R.E. Violandi
(617) 749–2162
RV WHITEHALL CORP.
40 Industrial Park Road
Hingham, MA 02043

PSSS (Portfolio Spectrum Selection System)

Operating System: VMS

Keywords: • Financial analysis • Financial planning • Forecasting • Investments

PSSS, used to find portfolios on the mean-variance efficient frontier from a large universe of investments, enables the portfolio manager to simultaneously manage up to 10,000 securities. Efficient portfolios are provided at multiple risk levels for the holding period desired and are forecast for any point in time determined by the user.

The PSSS package uses daily historical return-time-series data from the CRSP data base or other sources and can input up to 5400 daily returns for each security. The frequency spectra are computed and used to provide high resolution of the variance-covariance information for each security. PSSS requires IMSL to provide the algorithm simplex solutions and to do the Fourier time-series analysis.

Continuing maintenance and support are available. A version of this product is available for CYBER systems.

Price: $500,000
Contact: C. K. Jones
(301) 647–2775
KEN INVESTMENTS INC.
P.O. Box 1221
Boulder, CO 80306

Research System

Operating System: MicroVMS, VMS
Keywords: • Data base management • Decision support • Financial analysis • Investments

This relational data base management system and report writer acts as a research module and security screen for our VAX-based portfolio management system or as an independent research system. The system allows the user to sort and select investment securities from electronically delivered data and to access portfolio information from the account detail modules of our portfolio system. Storing information from such data base services as Value Line, Compustat, Telestat, IBES, and others, the system also accepts manual inputs from company professionals. The user can add and delete data base fields; perform calculations, using data base fields; calculate new fields; and perform ratio calculations and sorts, using the data base.

The Research System can be used to create ad hoc screen reports in a specified area, such as industry sector, security type, price to book, and others.

Price: $25,000 – $150,000
Contact: M. C. Weiler, Jr.
(617) 542–6181
COMPUTER AIDED DECISIONS, INC.
31 Milk Street
Boston, MA 02109

Safe Deposit System

Operating System: ULTRIX–32
Keywords: • Banking • Financial planning

This system helps financial institution management and personnel evaluate and use the organization's assets more efficiently. The Safe Deposit System, written in RM COBOL, provides alternatives to the traditional numerical access to information, making the system easier to use and learn. Other features include a box-availability report, an activity history file, payment-due notices, and daily and monthly revenue reports. A user's guide and documentation are included.

A version of this product is available for the PDP–11 computer.

Price: $1250
Contact: Bob Ginn
(901) 767–3759
INDUSTRY SOFTWARE SALES, INC.
P.O. Box 240804
Memphis, TN 38124

SCOUT Kostenrechnung

Operating System: VMS
Keywords: • Cost accounting • Forecasting • Project management • Spreadsheets

This product for cost accounting is configured for German-speaking users in Austria, Germany, and Switzerland.

Price: Available upon request
Contact: Rainer Burken
(0761) 70799
DATANORM SOFTWARE GMBH
Kronenstr. 2–4
7800 Freiburg
West Germany

Software International General Ledger, Financial Reporting, and LEDG–LINE System

Operating System: VMS
Keywords: • Accounting • Decision support • Financial analysis • General ledger

This system offers an accounting organization a comprehensive productivity tool to close company books quickly and to provide on-line information needed to make timely financial decisions. This product's immediate, precise, on-line ledger control allows a company to manage its costs, projects, budgets, work in progress, statistical accounting, and daily financial operations.

The system has been designed to be user responsive; to provide accurate, up-to-date financial information; and to offer the flexibility to handle a company's changing needs and reorganizations. This system interfaces with the Software International Accounts Payable, Accounts Receivable, Fixed Assets, Payroll/Personnel, and Forecasting, Modeling, and Reporting systems.

Price: Available upon request
Contact: Gary Kuba
(617) 937–8500
INTERACTIVE SYSTEMS, INC.
600 Suffolk Street
Lowell, MA 01854

Spread Financial Modeling Language

Operating System: VMS
Keywords: • Financial planning • Forecasting • Spreadsheets

This system helps financial and operational managers respond to changes in the business environment. Attractive spreadsheets are created from simple models consisting of both data and formatting rules. Data may be stored in independent files that are accessed by the model. Parameters reflect common financial terminology.

Built-in functions assist the planner with standard calculations, such as compound and incremental growth; present, minimum, and maximum values; and shifting data. To facilitate what-if investigations, the planner may include substitution variables in the model and provide different values each time the model is processed.

A sophisticated data file generation and access capability allows the user to consolidate multiple files and models with a few commands. Files used by Spread may be read or written by custom programs and other packages, allowing the generalized reporting and data manipulation capabilities of Spread to enhance specialized applications systems.

Spread supports forecasting, budgeting, cash-flow planning, divisional consolidation, and other applications. Spread may be used stand alone or may be interfaced with other components of the COUNT® Integrated Financial System.

Price: $8000
Contact: Jenny McCoy
(703) 790–1700
L&L SOFTWARE, INC.
8200 Greensboro Drive, Suite 200
McLean, VA 22102

Stock, Option, Future Ticker Interface

Operating System: VMS
Keywords: • Banking • Financial analysis • Investments

Distribution medium: magnetic tape.

The program reads security price tickers from the New York Stock Exchange (consolidated ticker), OPRA, the Chicago Board of Trade, and the Chicago Mercantile Exchange and maintains real-time prices for immediate access through query by user-developed programs. The program, developed by Software Group, Inc., is intended for investment bankers, stock brokerage firms, institutional investors, and anyone requiring access to real-time security information. Written in C, the program requires up to four megabytes of main memory.

Price: $150,000
Contact: Len Bole
(312) 622–6666
NATIONAL COMPUTER NETWORK OF CHICAGO, INC.
1929 N. Harlem Avenue
Chicago, IL 60635

Stockmaster™

Operating System: UNIX* (System V)
Keywords: • Information management • Investments • Mailing lists • Spreadsheets

This multiple-portfolio management system for investors, stockbrokers, institutional traders, and investment clubs provides a sophisticated yet easy-to-use handling of transaction processing, portfolio pricing (Warner or Dow Jones), record keeping, and money management. The system contains an appointment tickler, mailing list manager, and interest and dividend spreadsheet and maintains and processes critical client information. Current portfolio and realized capital gains are available both on screen and as printed reports. This complete investment tool for investment professionals contains an optional money manager's module that tracks cash in and out of any account and all transactions through an audit trail.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $995
Contact: Matthew B. Brosious
(212) 221–3016
COMPUTER MASTERS INTERNATIONAL CORP.
39 West 38th Street
New York, NY 10018

STRATAGEM

Operating System: MicroVMS, VMS
Keywords: • Decision support • Financial planning • Forecasting • Sales analysis

Memory required: 1MB.

The design of this fourth-generation decision-support system integrates data management, modeling, statistics, report writing, graphics, and an application development language. STRATAGEM, written in C, stores alphanumeric data in multidimensional arrays. An array can have any number of dimensions. A relational data dictionary is used for data base administration and hierarchical consolidations. A query language extracts any portion of the array for display or analysis. Modeling is nonprocedural and solves simultaneous equations.

Such features as what-if analysis, goal seeking, and Monte Carlo are also available. Statistics include regression, Box-Jenkins, seasonal adjustment, smoothing, trending, and Anova. STRATAGEM has its own proprietary graphics and direct links to Sas Graph and Tel A Graf. The report writer has many built-in features, including column and page overflows and automatic mathematical calculations. The programming language is procedural and is used for production systems, menu creation, and data validation. Applications include financial reporting, marketing information systems, human resource management, and corporate models.

Price: $15,000 – $75,000
Contact: Bennett Davies
(617) 267–5340
INTEGRATED PLANNING, INC.
338 Newbury Street
Boston, MA 02115

Supercomp-Twenty™

Operating System: VMS
Keywords: • Spreadsheets

Distribution medium: 9-track 1600 bpi magnetic tape.

This portable electronic spreadsheet program combines the ease of use common to microcomputer packages with the modeling power of mainframe financial-planning packages. Extensive documentation, on-line help, and user-friendly screen orientation enable the novice to build realistic business plans in a few hours.

Supercomp-Twenty:

- Contains flexible file handling, command files, customer report generation, and large model space, allowing the system to handle corporatewide tasks, such as budget consolidation, inventory scheduling, and investment planning
- Draws data from many sources, including general ledgers and most data base packages, permitting a portable modeling activity shared among several machines
- Reads files from or creates files for any program using data in a tabular format
- Runs compatibly with programs that format text and data in prescribed fields
- Allows worksheets 999 columns by 999 rows
- Enables the user to redefine the terminal keys and to define new terminal types by editing the terminal definition file

DIGITAL distributes this software product under license from Access Technology, Inc.

Supercomp-Twenty™ is a trademark of Access Technology, Inc.

Refer to SPD #A3.76.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1395
Contact: Consult your local DIGITAL sales office (see Introduction).

Tax Planner

Operating System: VMS
Keywords: • Financial analysis • Financial planning • Forecasting • Taxes

The Tax Planner may be used to project income taxes for 1983, 1984, and 1985, based on the applicable tax law in effect on July 1, 1982. In addition to the selection of the most favorable income tax method, the system calculates Form 4972 — special 10-year averaging method, self-employment tax, minimum taxes, and alternative minimum tax. Tax Planner automatically calculates taxable capital gains or losses, charitable contributions and medical expense limitations, marriage tax penalty deduction, nonrefundable credit, and penalty for underpayment of estimated tax.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bob Sprowls
(904) 434–2685
DIGITAL SYSTEMS, A DIV. OF UCCEL
114 E. Gregory Street
Pensacola, FL 32501

TECHSCORE

Operating System: Independent
Keywords: • Banking • Credit • Retail

This credit-scoring system uses advanced optimization techniques, provides a scoring formula that is tailored to your credit goals and easily adjusted to reflect changes in your credit policy, and offers full control over the characteristics of your scoring formulas and the results they achieve.

A version of this product is available for the PDP–11 computer.

Price: $33,500 – $66,000
Contact: Gregory Keyes, Sales Manager
(609) 987–2400
TECHNICA, INC.
3 Independence Way
Princeton, NJ 08540

TOLAS–FA (Fixed Assets)

Operating System: VMS
Keywords: • Accounting • Fixed assets • Property management • Taxes

This system records, processes, and reports information about asset depreciation and investment tax credit amortization. Fixed Assets enables users to track fixed asset–related transactions for general ledger and to report depreciation amounts by asset for book and both state and federal tax purposes. The system provides accounting, tax, and property control reports and uses any of three standard accounting conventions and one of four depreciation methods, including ACRS, for each asset. TOLAS Fixed Assets can be integrated with the TOLAS Financial Reporting/General Ledger module, allowing distributions to be automatically summarized and posted to the general ledger. A special VAX-to-PC interface can transfer raw or processed data from TOLAS files to personal computers for analysis, reporting, and graphing by LOTUS 1,2,3 or other MS–DOS–based software. TOLAS Fixed Assets is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $8000 – $15,000

Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TOLAS–FR (Financial Reporting)

Operating System: VMS

Keywords: • Accounting • Financial analysis • General ledger • Report writer

TOLAS Financial Reporting provides multicompany general ledger with a powerful report writer for financial statements. This package provides up to 14 accounting periods in a fiscal year with a 3-year calendar. A multiphase closing on a period-end and a year-end basis allows the user to process journals in two periods concurrently. Automatic allocation processing and accrual reversals are standard system functions, along with 3-phase budgeting. The report writer can duplicate reports being used and can create new reports. Financial Reporting can be interfaced to other TOLAS accounting and distribution modules or may stand alone, with transactions entered through an online journal entry function. A special VAX-to-PC interface can transfer either raw or processed data from TOLAS files to personal computers

for analysis, reporting, and graphing by LOTUS 1,2,3 or other MS–DOS–based software. TOLAS Financial Reporting is written in native-mode VAX BASIC using DIGITAL standard RMS.

TOLAS is available on a turnkey basis or as add-on software on existing DIGITAL computers. Included with the software license are standard system specifications, program sources and documentation, users' manuals, and a 3-month warranty. Available at additional cost are systems analyses and customer specifications, package modifications, custom documentation, data conversion, user training, and extended warranty and support services.

A version of this product is available for the PDP–11 computer.

Price: $11,500 – $22,000
Contact: Allen L. Pinkus
(412) 963–6770
TRANSCOMM DATA SYSTEMS INC.
1380 Old Freeport Road
Pittsburgh, PA 15238

TUFFS — Futures and Options System

Operating System: VMS
Keywords: • Accounting • Banking • Investments

This fully integrated mainframe and PC software is used by the money center banks, international banks, and brokerage firms for futures, options, forward rate agreements, and interest rate swaps, including trader support, arbitrage and hedge analysis, accounting, back-office facilities, and FCM processing. TUFFS handles worldwide requirements on a branch-by-branch basis, with consolidated reporting.

Price: $5000 – $75,000
Contact: Joseph B. Paperman
(212) 943–0171
ULTIMATE DATA SYSTEMS LTD.
26 Broadway, Suite 1257
New York, NY 10004

Unicalq 3-D Spreadsheet

Operating System: UNIX* (Berkeley, System V), VMS
Keywords: • Decision support • Financial analysis

This powerful 3-dimensional, virtual memory electronic spreadsheet offers very large spreadsheet size yet is optimized for efficient time-sharing use through dynamic memory allocation based on spreadsheet contents. Special features include file encryption for security, on-line help for commands and syntax, and extended numeric, financial, logical, arithmetic, conditional, and operational functions.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $750 – $2500
Contact: Uniq Sales Department
(312) 879–1008
UNIQ DIGITAL TECHNOLOGIES
28 S. Water Street
Batavia, IL 60510

ViewComp Electronic Spreadsheet

Operating System: ULTRIX–32, UNIX* (Berkeley, System III, System V)
Keywords: • Decision support • Financial analysis • Spreadsheets

ViewComp, an electronic spreadsheet designed specifically for the UNIX* environment, offers all the capabilities expected of an electronic spreadsheet. In addition, the data it stores and uses is completely UNIX*-compatible.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $500 – $800
Contact: Mark Pearson
(415) 824–9300
UNICORP SOFTWARE, INC.
226 Sanchez
San Francisco, CA 94114

XSP Spreadsheet, Financial, and Statistical Analysis System

Operating System: ULTRIX–32, VMS
Keywords: • Financial analysis • Forms management • Spreadsheets

The XSP spreadsheet is integrated to the XED office systems package through the XED menu processor. The package handles 500 fields of information in either columnar or free-form modes. XSP allows unlimited text to be inserted between fields or lines of the analysis, permitting direct integration of finished reports with word processing documents. The spreadsheet also permits multiple forms based on previous data and automatically updates fields from previous forms.

The finished document may be directly accessed by either the XED word processor or the XDA document assembler for further editing or document merging. The completed document may be printed on draft- or letter-quality printers.

XED office systems programs are designed and coded for UNIX* Version 7, System III, System V, and Berkeley 4.1 and 4.2. The programs contain a terminal description file and a printer definition and proportional spacing increment table (both user definable) to provide maximum installation flexibility and efficiency in a multiuser environment. XED is loaded in the UNIX* multitasking operating system as a shared text file.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Ted Ferguson
(818) 884–2000
COMPUTER METHODS, LTD.
P.O. Box 3938
Chatsworth, CA 91313

Government

Camerique

CCS Municipality System

Operating System: VMS
Keywords: • Accounts payable • Automotive • Billing • Payroll

This program supports utility billing, payroll, credit union, vehicle licensing, and accounts payable applications.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $75,000
Contact: Stuart M. Katz, President
(312) 480–9880
COMMERCIAL COMPUTER SERVICES, INC.
3000 Dundee Road, Suite 402
Northbrook, IL 60062

CMR (Computerized Municipal Resources)

Operating System: VMS
Keywords: • Billing • Real estate • Taxes

CMR is an ad valorem tax appraisal and billing system designed for municipalities. Written in COBOL, the system may be either rented or purchased.

Price: $25,000 – $100,000
Contact: Richard Swadel
(617) 851–8047
M.M.C., INC.
1049 East Street
Tewksbury, MA 01876

DOCKETRAC™

Operating System: VMS
Keywords: • Decision support • Information management • Law • Scheduling

DOCKETRAC is a civil and criminal trial court information system that automates the case tracking, docketing, and scheduling of cases for public courts. In addition to providing on-line status checks, speedy trial monitoring, and pending-case inquiries by name of party, litigant, or defendant, the system assists in the collection of key information about a case from referral through final disposition. An optional debt-collection module processes information relating to fines, forfeitures, and other payments due the court. DOCKETRAC can be customized to the specific requirements of the jurisdiction.

DOCKETRAC permits instantaneous on-line data entry, updating, and retrieval. On-line inquiries can be made through a variety of cross-references, such as litigant name, case number, calendar date, judge, prosecutor, defense attorney, party, witness name, and courtroom. Numerous user-defined forms, such as docket sheets, subpoenas,

release forms, and back-up reference cards, can be produced on line or in batch mode. Standard reports, such as calendars by type of proceeding, location, and judge, can also be produced. In addition, two flexible report packages enable the user to define a variety of descriptive and statistical reports for ad hoc or periodic production. The generalized inquiry package provides descriptive data on groups of cases sharing one or more attributes. The management report package, which counts occurrences of records, provides aggregate numbers on what is happening and why at each stage in the judicial process.

Price: $55,000

Contact: Robert C. Fitzsimmons
(800) 221–3187
INSLAW, INC.
1125 15th Street, N.W.
Washington, DC 20005

Government-11

Operating System: VMS

Keywords: • Accounting • Information management

This system provides all the services and capabilities provided in KMK's MAP–11 Municipal Accounts Payable system, MGL–11 Municipal General Ledger/Financial Reporting system, MPY–11 Municipal Payroll system, MAR–11 Municipal Accounts Receivable system, VEH–11 Vehicle Registration/Reporting system, TAX–11 Tax Assessment/Collection system, Voter-11 Voter Registration system, and Appraisal-11 Property Appraisal system. In addition to the wide range of reporting capabilities, Government-11 can be tailored to both in-house and service bureau/time-share environments. The system can be purchased with all the previously mentioned packages, or the packages can be purchased in any combination as needed by the user. All packages use interactive screen entry.

For city governments, substitute UTL–11 Utility Billing/Accounts Receivable system for MAR–11 and VEH–11.

A version of this product is available for the PDP–11 computer.

Price: $14,000 – $33,000

Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072

Housing Authority — Section 8

Operating System: VMS

Keywords: • Property management • Real estate

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

The interactive Section 8 system replaces a tedious, error-prone manual undertaking with a simple, reliable system for automating a HUD Section 8 Rent Subsidy Program. The Section 8 system maintains tenant, landlord, and statistical information necessary to meet and exceed the federal government reporting standards placed on a Housing Authority agency. Screen-formatted data entry encourages user acceptance, decreases user training, and increases data integrity.

In addition to automating the clerical and reporting functions of a Housing Authority with a Section 8 program, the Section 8 system offers a consistency in accounting and in reporting in an otherwise volatile atmosphere.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $16,000
Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Housing Authority Tenant Accounting

Operating System: VMS
Keywords: • Billing • Property management • Real estate • Statistics

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

This interactive system automates the record keeping and reporting and drastically reduces the amount of handwork normally associated with public housing authority offices. The record-keeping problems of public housing authorities, no matter what size, are virtually the same: massive amounts of paperwork, the need for enormous amounts of tenant and statistical information and accounting control, HUD reporting requirements, and information necessary to fulfill requests of other federal, state, and local agencies. The Tenant Accounting system automates those clerical and reporting functions while providing certain intangibles to this, and future, administrations: a continuity of accounting and a continuity of information.

A version of this product is available for the PDP–11 computer.

Price: $8000 – $23,000
Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

JAILTRAC™

Operating System: VMS
Keywords: • Decision support • Information management • Law

JAILTRAC is an on-line booking and jail management system designed to automate the tracking of arrestees, inmates, and cases for a law enforcement or correctional agency. The system captures key information about bookings into a facility and the management of defendants whether in custody or on release. Included is information about the arrest, offense, charges, personal descriptors, inmate property, scheduled appearances, pretrial release, visitor contacts, inmate financial accounts, and case-processing decisions. The system stores arrest and disposition information by individual charge. JAILTRAC can be tailored to the requirements of the jurisdiction.

Functions include on-line booking of arrestees into custody; bail/bond recording; pretrial release screening; tracking of inmates, including personal accounts; supervision during diversion, probation, and parole; and maintenance of a complete history of a person's detention. Information in the system is immediately retrievable through a variety of cross-references, such as inmate name or ID number, scheduled appearance dates, program enrollment, judge or prosecutor name, and attorney and visitor names. Booking reports, property and bail receipts, and notifications can be produced on line or in batch mode. Standard reports, such as inmate lists by section or duty type, case-status lists, and calendars, can be produced on demand or periodically.

In addition, two flexible report packages enable the user to define a variety of descriptive and statistical reports for ad hoc or periodic production. The generalized inquiry package provides descriptive data on groups of cases sharing one or more attributes. The management report package, which counts occurrences of records, provides aggregate numbers on what is happening within a facility or program.

Price: $55,000
Contact: Robert C. Fitzsimmons
(800) 221–3187
INSLAW, INC.
1125 15th Street, N.W.
Washington, DC 20005

LEADS℠ (Logistics Entry and Analysis Data System)

Operating System: VMS
Keywords: • Data entry • Forms management • Report writer

LEADS is an interactive package used to enter and edit data for logistic support analysis records required of defense contractors under MIL–STD–1388. LEADS significantly reduces task analysis and data sheet preparation time by eliminating duplicate entries. LEADS automatically transfers derivable information from previous entries to other required fields, eliminating errors, simplifying updates, and allowing for global changes and special management reports.

LEADS prints government-required logistics data sheets and interfaces directly with government-furnished summary report software.

A version of this product is available for the PDP–11 computer.

Price: $50,000
Contact: Eli Schneider, Project Manager
(703) 979–8220
EVALUATION RESEARCH CORP.
1755 Jefferson Davis Highway, #800
Arlington, VA 22202

MAMS (Municipal Accounting Management System)

Operating System: VMS
Keywords: • Accounting • Information management • Taxes

This computer-based information system for small to medium-size local governments includes Fund Accounting (General Ledger, Accounts Payable, Accounts Receivable), Payroll/Personnel Management, Real Estate Tax Collection, Income Tax Collection, and Utility Billing modules. A report and graphics program generator, which integrates to all modules, is also available.

MAMS conforms to all NCGA (National Council on Governmental Accounting) and MFOAC standards. All MAMS-generated financial statements conform to generally accepted accounting principles, and clear audit trails are produced for all transactions within the system. The MAMS system includes the compiled software (source-level code is available for qualified distributors), a 250-page user's guide, and simplified operator charts that assist key personnel unfamiliar with on-line systems. A special distributor program for MAMS is available to qualified systems houses.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $20,000
Contact: Ron Morris
(412) 264–4773
ISR MUNICIPAL SYSTEMS, INC.
410 Rouser Road, Airport Office Park, Building 1
Coraopolis, PA 15108

MAP–11 (Municipal Accounts Payable)

Operating System: VMS
Keywords: • Accounts payable

This highly flexible method of posting A/P charges and making cash disbursements is done with interactive screen forms designed for posting ease. In the A/P charges posting form, the user is allowed an unlimited number of distributions to the MGL–11 system for each invoice entered. Discount information is assigned to the vendor for automatic display at posting time but may be overridden by the operator if desired. Vendor charges that occur repeatedly may be placed in an automated file for posting on operator demand. Cash disbursements may be made on an individual invoice basis, or a certain dollar amount may be applied to the oldest invoices first (balance-forward method). Checks may be printed following each disbursement session. Unlimited check formats can be accommodated with the user-defined parameter files. All reporting is available for an unlimited date range, on demand by the user. Aging reports are available that detail the invoices that are current, past due, or not yet due. Cash-requirement reporting is also available as a management tool. The MAP–11 system interfaces to the MGL–11 system for automatic posting of A/P information to the G/L.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $4000
Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072

MAR–11 (Municipal Accounts Receivable)

Operating System: VMS
Keywords: • Accounts receivable

This system provides the user with an interactive method of posting A/R charges and payments, obtaining historical reports and aging information, and creating statements. Cash receipts may be applied on a balance-forward or open-item basis. Unapplied credits may be posted to accounts until the correct invoice can be matched and paid. Virtually any statement and past-due notice format can be designed by the user with parameter files. Recurring customer account charges can be made. All reporting for management on account dollar activity is available for any date range. Aging analysis for any date range can be comprehensive or by department. Sales tax reporting is also provided by the system. Multiple taxing entities can be accommodated. MAR–11 operates in a single-user (in-house) environment or in a multiuser (time-share) environment. The MAR–11 system interfaces with the MGL–11 system for direct posting of A/R entries to the G/L.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $4000
Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072

MGL–11 (Municipal General Ledger and Financial Reporting)

Operating System: VMS
Keywords: • Accounting • General ledger

The date-driven MGL–11 system records and reports financial information and allows the user to design financial statements, using parameter files. Tailoring codes allow the user to define the length and the format of the chart-of-account number, the format of the date used for data entry and reporting purposes, and the existence of "proof" copy journals after posting sessions. Multiple posting forms allow a variety of data input forms. Standard and allocation journals allow the user to automate certain postings that regularly are made to accounts for either set dollar amounts or set percentages of account balances. Up to 13 accounting periods may be defined by the user for both the current and prior years. Budgetary and prior-year comparison information may be entered. All reporting from the MGL–11 system is available for any user-specified date range. Many different financial statements can be designed by the user, including balance sheets, income statements, loan analysis, ratio analysis, change in financial position, and so on. The system interfaces with payroll, utility billing/accounts receivable, accounts payable, and payroll for a completely integrated accounting system.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $4000
Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072

MPY–11 (Municipal Payroll)

Operating System: VMS
Keywords: • Payroll

This sophisticated payroll processing, reporting, and check-writing system allows the user to define unlimited pay items and deductions that may be posted for each employee. Any type of pay or deduction can be used — hourly, salary, piece rate, percentages, and so on. All necessary tax reporting can be captured during the payroll posting. Multiple

state records can be maintained for an employee working in more than one state. EIC calculations and tip reporting can be accommodated when applicable. Check registers follow each posting session, detailing each check written. Any changes made to salary amounts during the posting process are noted on the check register for security purposes. Historical information is maintained for each employee for any date range specified. A tailoring option converts the calculations, screen descriptors, and menu selection to a Canadian payroll system. Any style of check can be accommodated with the user-defined parameter files. The MPY–11 system interfaces to the MGL–11 system for automatic posting of the payroll to the G/L. Governmental reports, such as W–2 forms and quarterly payroll reports, and management-oriented reports, such as pay rate changes, terminations, historical check registers, and so on, are easily generated and printed.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $4000

Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072

MUNIS/PLUS

Operating System: ULTRIX–32, VMS

Keywords: • Accounting • Payroll • Purchasing • Taxes

This package provides financial control and accounting support for cities and towns. The package implements fund accounting according to GAFF standards and provides general ledger, budgeting, accounts payable, accounts receivable, purchase orders with encumbrancing, tax administration, payroll, voter registration, and water and sewer billing.

The package is written in VAX–11 COBOL and uses the Common Data Dictionary, DATATRIEVE, and the Forms Management system. The package integrates with PTI's REASON to transfer tax values from the valuation package to the tax administration package. From there, tax bills are generated, and the accounts receivable file is updated.

The general ledger number can be up to 7 segments and 19 digits. A quick organization code–access method is also available to reduce the amount of typing.

All packages can be combined or used singly. The general ledger is required for other packages.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $250,000
Contact: Walter R. Crosby
(617) 787–3522
PROPERTY TECHNOLOGY, INC.
90 Windom Street
Boston, MA 02134

PREMISYS (Property Record Management Information System)

Operating System: VMS
Keywords: • Property management • Real estate • Taxes

PREMISYS is an ad valorem tax appraisal and billing system designed for municipalities and is written in FORTRAN.

This product is also available on a lease/license basis.

Price: $25,000 – $100,000
Contact: Angelo Marino
(617) 679–8100
M.M.C. INC., MUNICIPAL APPRAISAL SERVICE CORP.
164 Bedford Street, P.O. Box 551
Fall River, MA 02722

PROMIS 82™

Operating System: VMS
Keywords: • Decision support • Information management • Law

PROMIS 82 automates the tracking of cases, defendants, and charges in a public prosecutor's office (federal, state, or local). The system is designed to capture key information about a case from arrest through disposition, including, for example, information about the offense, arrest, police officer, defendant, case classification, arraignment and other scheduled events, witnesses, defendant status and activities, charges and their disposition, and reasons for discretionary action.

Functions include on-line case tracking, pending-case checks by defendant name or ID number, automated calendaring, witness management, disposition reporting, and criminal-history checking. Once entered for a case, information is immediately retrievable on line and can be cross-referenced by scheduled event, calendar date, and name of prosecutor, judge, witness, and attorney.

User-defined forms, such as subpoenas, notifications, new-case reports, and manual back-up cards, can be produced on line or in batch mode. Standard reports, such as calendars and case-status lists, can be produced on demand or periodically. In addition, two flexible report packages enable the user to define a variety of descriptive and statistical reports for ad hoc or periodic production. The generalized inquiry package provides descriptive data on groups of cases sharing one or more

attributes. The management report package, which counts occurrences of records, provides aggregate numbers on what is happening and why at each stage in the judicial process.

Software functions include menu-driven screens, security, on-line entry, update, retrieval and tally, logging and recovery, data base adjustment, purging, forms and report generation, and tailoring.

Price: $55,000

Contact: Robert C. Fitzsimmons
(800) 221–3187
INSLAW, INC.
1125 15th Street, N.W.
Washington, DC 20005

REASON (Real Estate Appraisal System On Line)

Operating System: ULTRIX–32, ULTRIX–32m, UNIX* (Berkeley, System III, System V), VMS

Keywords: • Decision support • Real estate • Sales analysis • Taxes

This full-featured real estate property tax valuation system serves all sizes of jurisdictions. The system covers residential, commercial, industrial, and agricultural properties, as well as condominiums. The core of the valuation system is the Unify data base management system, which features a forms generator, a query language, a security handler, a report writer, and query by forms. Valuation may be done at each screen and may be used to determine the range of valuation changes that may be made.

Through VAX Information Architecture, the system uses the Common Data Dictionary, DATATRIEVE, and the Forms Management System.

The system is backed up with a range of services, including appraisal standards training and support, appraisal consulting, revaluation support, phone support, and updates.

The system is written in BASIC, COBOL, and FORTRAN and is compatible with every UNIX* version. Source code and object code are written in highly portable C and are distributed with the system. The end-user code can be modified for valuation table references.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $10,000 – $250,000

Contact: Walter R. Crosby
(617) 787–3522
PROPERTY TECHNOLOGY, INC.
90 Windham Street
Boston, MA 02134

RECAP

Operating System: VMS
Keywords: • Accounting • Billing • Information management • Utilities

This complete data processing system, designed for municipal governments and governmental utilities, includes a consumer billing system (approximately 500 programs) that allows for simultaneous or separate billing of electric, water, sewerage, gas, refuse, and steam. Financial applications are also included to provide payroll, general accounting (fund, encumbrance, appropriations, and budget), accounts payable/purchasing, materials and supplies, and a complete work order cost accounting system, which includes maintenance of continuing property records. This software conforms to all REA, TVA, and DOE accounting standards, as well as to known PURPA regulations.The system also offers management information applications, including vehicle analysis, bad-debt service order management, fixed assets, electronic spreadsheet, TVA reporting, outage reporting, transportation, utilicorder, and service order management. An electrical distribution engineering system is available that includes transformer load management, voltage-drop calculations, and switching studies.

A version of this product is available for the PDP–11 computer.

Price: $35,000 – $250,000
Contact: H. V. Bonds, Jr.
(803) 799–4094
DIGITAL SYSTEMS, INC.
P.O. Box 12
Columbia, SC 29202

Tax–11

Operating System: VMS
Keywords: • Property management • Real estate • Taxes

Tax–11 is a comprehensive interactive ad valorem (property) tax assessment and collection package. It is designed to provide on-line inquiry into taxpayer information and to provide flexibility in maintenance of taxpayer information, discount/penalty rates, property values, exemption values, and tax rates.

A version of this product is available for the PDP–11 computer.

Price: $7500 – $20,000
Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072-7353

VEH–11 (Vehicle Registration)

Operating System: VMS
Keywords: • Automotive • Maintenance

Digital Software Services Vehicle Registration system records, maintains, and reports information about registered vehicles. The system also maintains the file for reporting vehicles to be reregistered. VEH–11 allows office personnel to accurately report information about vehicle registration to the vehicle registrar. Vehicle lists may be printed alphabetically or numerically or by class. The software also generates a report of vehicles due to be reregistered for each month of the year alphabetically or by the validation or tag number.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $5000
Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072

Voter–11

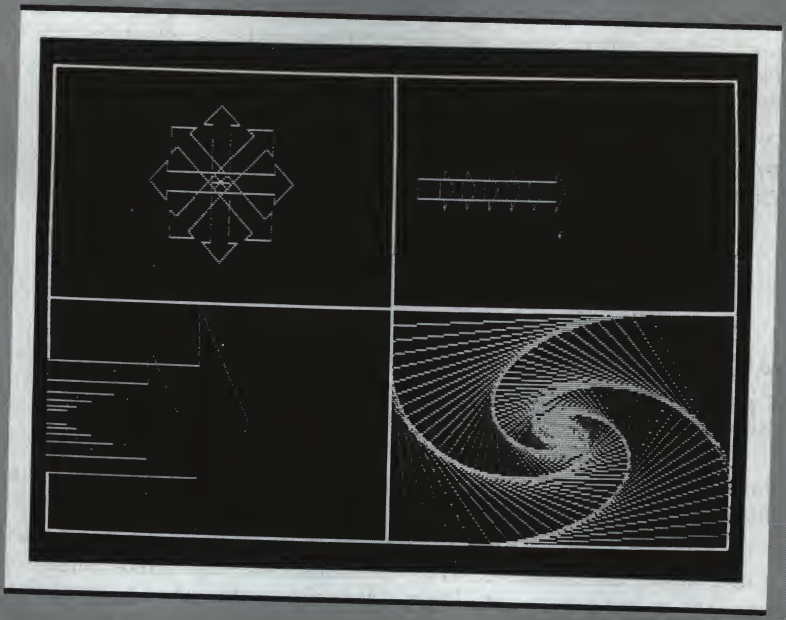
Operating System: VMS
Keywords: • Information management • Recruiting • Report writer

This comprehensive voter registration and reporting package is designed to provide on-line inquiry into voter information and to provide flexibility in maintenance of the file when used for selection of prospective jurors. Features include alphabetical and numerical listing of the master file, voter registration card generation, report of deleted/purged voters, and random jury selection.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $8000
Contact: Ronald R. Kirchhoff
(806) 293–4286
KMK ENTERPRISES, INC.
701 Broadway, Suite 204
Plainview, TX 79072-7353

Graphics



ACS (Adage Core System)

Operating System: VMS
Keywords: • Device drivers/handlers • Engineering • Mechanical engineering • Programming tools

ACS, a high-level user-friendly software programming system used with Adage 4145 Work Stations, requires an Adage 4145 Work Station connected to a host minicomputer. Modeled after the proposed ACM/SIGGRAPH Core standard, ACS includes an extensive library of FORTRAN-callable subroutines plus 4145 microcode. Features include 3-D graphics primitives, engineering viewing operations, display list operations such as image transformations, graphics input functions, a program debugger, and support for 4145 options. Each host driver costs $3000 above the minimum price.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $7000
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

AIDS (Architectural Interactive Design System)

Operating System: MicroVMS, VMS
Keywords: • Architecture • CAD/CAM • Mechanical engineering • Structural engineering

Memory required: 1.5 megabytes of virtual memory. Distribution medium: 1600 bpi magnetic tape.

This 2-D and 3-D design system, written in FORTRAN, is for architectural, engineering, and construction industries. A complete library of symbols and standard details provides information on the production of drawings, from presentation schematics to working drawings and contract documents. The integral relational data base manager tracks the production and archiving of drawings and provides the design professional with valuable material information. Productivity benefits are well established for both drawing speed and project coordination.

The system runs with Tektronix 4014- or 4100-series terminals and supports most of the popular plotters.

Price: $30,000 – $80,000
Contact: Peter H. Martin
(213) 627–1427
ARCAD
811 W. Seventh Street
Los Angeles, CA 90017

Analect DSS Graphics

Operating System: VMS
Keywords: • Data base management • Decision support • Financial analysis • Report writer

Combining the ease of use demanded by managers for their business charts with the advanced graphics features and analytic tools required by technical users, Analect DSS Graphics allows users to locate or move graphs, legends, or text with a light pen, mouse, or any other locator device. Analect DSS Graphics integrates chart graphing (bar, pie, line, time, XY charts, histograms, written charts) and advanced drawing capabilities (maps, corporate logos, polygons, contours, 3-D drawings) with a full range of data calculations, analysis, and forecasting techniques.

With one Analect DSS Graphics command, a user can load data from a sequential file or from a micro spreadsheet program. The system's data load utility handles complex data bases of unlimited size. In addition, Analect DSS Graphics features a procedural language to build a personalized system with prompts in a user's own terminology.

Analect DSS Graphics may be fully integrated into Dialogue's comprehensive Analect Decision Support System, which features statistical and multidimensional analysis, a report writer, financial modeling, a relational data base management system, and an application-building language.

Price: $17,000 – $28,000
Contact: Henry Abelman
(212) 425–2665
DIALOGUE INC.
19 Rector Street
New York, NY 10006

AZPMAP

Operating System: VMS
Keywords: • Automotive • CAD/CAM • Data conversion • Mapping

Distribution media: 9-track 800/1600 bpi magnetic tape; others on request.

AZPMAP reads most AZP (Algemeine Zeichen Program) commands for Contraves plotters and converts to Kongsberg plot format.

Price: NKR 100.000
Contact: Hans Engfelt
47–3–73 82 65
A/S KONGSBERG VAPENFABRIKK
Data Systems Division
P.O. Box 25
N–3601 Kongsberg
Norway

BCP (Barcode/Block Character Plotter)

Operating System: VMS
Keywords: • Bar coding • Forms management • Printing

This software package enables VAX/VMS users to generate CODE 39 barcode on an LXY graphics printer. The package includes an interactive user program that permits on-line generation of graphics figures. The graphics figures, generated by library routines, include CODE 39–type barcode, block characters, and horizontal and vertical bars or lines.

The package also includes a library of graphics routines that can be linked to user application programs written in VAX–11 FORTRAN to provide graphics capabilities. User-written application programs access the VAX–11 BCP library routines to specify designs for shipping labels, shelf labels, barcodes, identification labels, forms, signs, and accounting documents.

Refer to SPD #26.26.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

BDS/GDS (Building Design System/General Drafting System)

Operating System: MicroVMS, VMS
Keywords: • Architecture • CAD/CAM
• Mechanical engineering • Structural engineering

Memory required: 1.5MB. Distribution media: 9-track magnetic tape, cassette tape, or cartridge disk.

This 3-D design and drafting CAD system for architects and engineers, developed by Applied Research of Cambridge, is written in FORTRAN. Features include color graphics, associative data, automatic perspectives, elevations and sections, preliminary and detail cost reports, and schedules and automatic dimensioning. Options include solids shading; space planning and facilities management; architectural, mechanical, electrical, and structural applications; and an interface to McAuto engineering design and analysis systems.

Price: $50,000 – $140,000
Contact: J. R. Pfeiffer
(314) 232–9622
MCDONNELL DOUGLAS AUTOMATION CO.
P.O. Box 516
St. Louis, MO 63166

BLOX Graphics Builder

Operating System: ULTRIX–32, UNIX* (Berkeley), VMS
Keywords: • Development tools • Programming tools • Source code control

BLOX Graphics Builder is a software tool for creating graphics application programs that use a mouse or other pointing device. Non-programmers can use BLOX to interactively draw icons, menus, screen layouts, and more. The result is a dynamic user interface that responds to your interactions and that can be used immediately. BLOX automatically creates an on-line help file for your application and retrieves and displays the help text you provide. BLOX can be used for rapid prototyping and experimenting with different interactive screens.

Programmers can use BLOX to add application-dependent code to any BLOX-built user interface. One application action is associated with each menu item on the screen(s) or with other interactive events that you can define. BLOX creates a source code linkage between the graphics user interface and your application routines.

BLOX also includes the Core Graphics library conforming to the 1979 SIGGRAPH proposed standard. That high-performance general-purpose library keeps up with today's high-speed graphics displays.

BLOX Graphics Builder is host- and device-independent. BLOX will run on any graphics device that supports your application.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $5000 – $10,000
Contact: Eve M. Goldfarb
(617) 876–7993
RUBEL SOFTWARE
215 First Street
Cambridge, MA 02142

CalComp Host Computer Basic Software (On Line/Off Line)

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers • Engineering

The basic software in the host computer produces data that is read by the CalComp 925 Controller and used to drive the plotter. Or, this host computer basic software drives plotters through the CalComp 906 Controller.

The basic software consists of 10 subroutines used to display graphic output on CalComp plotters. Most of the subroutines are written in FORTRAN; some are in assembly language. The PLOT subroutine controls the formatting of all plotting data and handles all output to the plotter. PLOTS initializes the PLOT subroutine. SYMBOL places

alphanumeric text and special symbols on the plotting surface. NUMBER places computed variables on the output page, with user control over format. AXIS plots an annotated axis with tick marks and title. LINE scales and plots arrays of data, with choice of line and/or point mode. SCALE computes factors to scale data from user units to plotter units. NEWPEN permits program selection of pens on multiple pen plotters. WHERE provides current pen coordinates and scale factor. FACTOR sets scale factor for the entire plot.

A version of this product is available for the PDP–11 computer.

Price: $500
Contact: James F. MacLeod
(714) 821–2011
CALIFORNIA COMPUTER PRODUCTS
2411 W. LaPalma Avenue
Anaheim, CA 92803

CALDGN — CalComp to Design File Interface Library

Operating System: VMS
Keywords: • CAD/CAM • Data conversion

When linked with a CalComp application program executing on an Intergraph-based computer, the CALDGN library intercepts the standard plotting functions and produces a drawing file instead. This smaller, more manageable design file can then be interactively displayed and edited on the Intergraph system, using the basic IGDS graphics procedures.

A version of this product is available for the PDP–11 computer.

Price: $2000
Contact: Debra P. Bressler
(713) 266–0000
EGT, INC.
11011 Richmond, Suite 700
Houston, TX 77042

CALSIF — CalComp to Standard Interchange Format Interface Library

Operating System: VMS
Keywords: • CAD/CAM • Data conversion

The CALSIF library subroutines emulate the basic CalComp host computer basic software. The routines are written in standard FORTRAN and can be compiled into a relocatable object library on any mainframe or minicomputer that supports the standard CalComp routines. The output of an application program linked with the CALSIF library is an ASCII (or IBM EBCDIC) file of Intergraph standard interchange format (SIF) instructions. When transmitted to the Intergraph system and run through the SIF translator, the final result will be a fully compatible Intergraph design file that can be reviewed, edited, and plotted.

This system produces a significantly smaller and more manageable output design file, requires little or no application program modification, and has a virtually transparent operation to the user.

A version of this product is available for the PDP–11 computer.

Price: $3000

Contact: Debra P. Bressler
(713) 266–0000
EGT, INC.
11011 Richmond, Suite 700
Houston, TX 77042

CCSI–PLOT®

Operating System: ULTRIX–32, VMS

Keywords: • CAD/CAM • Engineering

Distribution media: 8″ diskette, 9-track 800/1600 bpi magnetic tape.

This package allows the convenient use of a dot matrix printer/plotter as though it were a multipen, incremental X–Y plotter. Using CCSI–PLOT, a programmer can easily convert computed data into graphic form, taking full advantage of the available printer/plotter dot resolution. CCSI–PLOT also performs many extended functions that are impossible on standard pen plotters, including erasing previously drawn lines and shaded areas. The subroutines can be used as the building blocks for constructing user programs to produce a variety of graphic output, such as bar charts, organization charts, engineering drawings, contour plots, 3-dimensional plots, and perspective drawings.

The CCSI–PLOT package supplies graphics for Printronix P–Series, MVP, 4160, and MYPcolor printers; Trilog T–Series, Tip Series, C–Series Colorplot, and Colorplot II printers; Anadex printers; Epson printers; Okidata printers; Advanced Color Technology ACT–1 and ACT–11 printers; Quantex printers; Integral Data Systems, Inc., Prism, and Color Prism printers; CIE Terminals, Inc., CI300/CI600 printers; QMS Lasergrafix 800, 1200, and 2400 printers; and Ramtek 4100 printers.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $1950

Contact: Catherine Martin
(213) 595–8607
CERRITOS COMPUTER SERVICES, INC.
4320 Atlantic Avenue, Suite 1
Long Beach, CA 90807

CELLO — A Cell Organization Utility

Operating System: VMS
Keywords: • CAD/CAM • Software utilities

This utility package streamlines many of the maintenance functions commonly performed on Intergraph cell libraries. Those functions, which previously required a graphics terminal, are now accessible from low-cost alphanumeric terminals, allowing the graphics stations to continue to perform graphics operations. In addition, CELLO copies, moves, renames, and deletes cells from one or more cell files, allowing cell file manipulation and new-project set-up to be performed quickly and efficiently.

The ability to scale, change origin, modify levels, and edit cell descriptions from an alphanumeric terminal in bulk or in single-cell mode makes the existing methods of cell manipulation virtually obsolete. Documentation features provide for listing cell library contents (in summary or in detail) and automatic plotting of entire symbology libraries. That feature can be used to generate manuals of project cell libraries for reference and for consistency. Utility functions such as compressing, reducing, and creating cell file indexes are also available.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Debra P. Bressler
(713) 266–0000
EGT, INC.
11011 Richmond, Suite 700
Houston, TX 77042

CHART: Bar Charts

Operating System: MicroVMS, VMS
Keywords: • Mapping • Presentation aids

Memory required: 64K minimum.

This program, written in MACRO, creates bar charts with the colors, labels, and sizes according to user responses to prompts. Graphs appear on the CRT or can be drawn on the plotter.

Prompts, in order, are an "X" title along the bottom of the chart, X-column names (if MTH is entered for the first column name, the system fills in the month names for you), a "Y" title, Y–row 1 value (the value of the first tick mark on the Y-axis), the Y-row increment, and the value to be plotted in each column.

CHART applies to any business or planning function requiring compression of data into a simple-to-understand graphics format. The program is easy to understand, with superior presentation of data and different sizes, colors, and line types for many plots of a graph.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

CODE (Computer-Oriented Drafting Equivalent)

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Engineering • Manufacturing • Mapping

Memory required: 64K minimum.

This multipurpose package, written in MACRO, features 44 easy-to-use commands in a menu-driven, prompt-driven environment. The CODE editor has 14 commands to aid in restructuring existing drawing files. Used with other Starflo software, CODE provides absolute and relative geometric drawing power.

CODE applies to any design or drafting that calls for quick, clean renditions in a variety of scales, colors, and line types; facilitates family-of-parts programming or manufacturing that requires quick redimensioning and work prints; and can interface with tape punch or other peripherals. The program provides increased throughput, higher productivity, cleaner drawings, multimedia drafting, ease of use, and strong support utility software and enhancement packages.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

Contouring

Operating System: VMS
Keywords: • Mapping

Distribution medium: magnetic tape.

This system, written in FORTRAN, is a collection of routines that provide 3-D mesh grid generation and contour mapping capabilities. The vendor's DI–3000 system is a prerequisite for this system, which is device and machine independent. Contour maps can be generated from gridded or randomly located data. A rich set of options allows extensive control of map characteristics. Each option is set to a reasonable default initially, allowing the user to produce maps with minimum effort. Additional contour features include map-projection transformations; a "quick look" algorithm for fast graph preview, labeling the

maximum and minimum points, labeling individual data points, blanking regions of the maps, and generating various map boundaries. Additional gridded-surface features are separate "top" and "bottom" colors, combinations of x-direction, y-direction, and z-direction mesh lines; optional border skirts; and generalized 3-D axis generation.

Price: $2500 – $8000
Contact: Rob Look
(303) 530–9000
PRECISION VISUALS, INC.
6260 Lookout Road
Boulder, CO 80302

CORTEX EDDS (Executive Data Display System)

Operating System: VMS
Keywords: • Management • Presentation aids • Sales and marketing

This business software product displays corporate data, using a variety of graphics designs. This device-independent system is on line and user friendly. Using 14 lettering fonts, CORTEX EDDS transforms data into quality multicolored line plots, high-low-close plots (up to 10 variables for each plot), scatter diagrams, horizontal/vertical bar charts, and pie charts. Standard text may be displayed in a variety of fonts, including roman, Greek, italic, Gothic, and script.

Price: $7500
Contact: Lynn Hearl
(617) 894–7000
CORTEX CORP.
128 Roberts Road, Technology Center
Waltham, MA 02154

Cuechart

Operating System: MicroVMS, VMS
Keywords: • Presentation aids • Printing

Memory required: virtual system, 1MB. Distribution medium: magnetic tape.

Cuechart, written in FORTRAN, is easy to learn and use. You simply select a graph from a manual of predesigned bar, pie, and line charts; type the name into a terminal; answer a few questions that the terminal asks about data needed to complete the graph; and get a high-quality graph generated through TELL–A–GRAF.

The system consists of:

- A library of Cuechart graphs. ISSCO supplies an initial basic library that can be customized and added to or modified.
- Cuechart user's guides, which picture a company's basic graphs for user selection.

- Software that embeds Cuechart prompts into TELL–A–GRAF and performs as the Cuechart user prompter.

Price: $1500 – $4300
Contact: Jeff Anderson
(619) 450–0881
ISSCO
10505 Sorrento Valley Road
San Diego, CA 92121

D–PICT/AutoGraph

Operating System: VMS
Keywords: • Documentation • Financial analysis • Office systems • Presentation aids

This business graphics package for both novices and expert users uses predesigned charts, or AutoGraphs, and offers them to the user by way of a comprehensive pictorial user's manual. Experienced users can select an AutoGraph by name; supply the system with titles, labels, special text, and data; and display the resulting business charts on a graphics device. New users need only specify the desired display — bar, pie, line, or word chart — and the system will prompt for the remaining information, creating the ideal graph. That may all be accomplished in one session.

D–PICT/AutoGraph differs from other graphics products with predesigned charts in the variety of graphs available, ease of use, and quality of each graph. Because the graphs have been specially designed by experienced graphics designers, the annotations are in the right place; the titles, labels, and legends are positioned properly; and the lettering styles are attractive and clear.

Graphs can be output to many graphics devices. More than 100 devices are supported.

Price: $6000
Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

D–PICT/B (Business Graphics)

Operating System: VMS
Keywords: • Financial analysis • Office systems • Presentation aids

This functionally rich, menu-driven business graphics system produces high-quality graphics. The package provides a self-paced, self-teaching approach that allows the novice to create sophisticated charts and graphs with ease. The experienced user can move quickly through

the menu system to achieve the desired results. D–PICT/B offers hundreds of graphics solutions with features and capabilities that are limited only by your imagination. This graphics flexibility turns information into meaningful pictures. Graphics can be output to different graphics devices by selecting the device from the available list. More than 100 devices are supported.

Price: $11,500
Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

D–PICT/CONTOUR

Operating System: VMS
Keywords: • Mapping

D–PICT/CONTOUR is a software package for creating high-quality contour maps. The contours are smoothly curved and honor the original data. The package is very powerful and flexible for an experienced user but also easy to use for the inexperienced user. D–PICT/CONTOUR can be used for simple, quick-look contouring on a graphics terminal or for cartographic-quality output on a high-precision plotter.

D–PICT/CONTOUR allows the user to modify the appearance of contour maps by altering more than 50 parameters. Features under parameter control include contour line type (six types, including dotted and dashed contours), pen selection, contour thinning (a gradient parameter for each contour type, above which contours are dropped), and labeling frequency.

Graphics can be output to many different devices. More than 100 devices are supported.

Price: $9500
Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

D–PICT/GraphKit

Operating System: VMS
Keywords: • Application development • Device drivers/handlers • Mapping • Programming tools

This comprehensive library of callable subroutines for creating business graphics applications is written in FORTRAN–77 and contains about 40 subroutines. D–PICT/GraphKit has the tools for any business graphics application, including bar, line, pie, and word charts, in an easy-to-understand, easy-to-use system. Extensive color tables, pattern tables, and markers are available for a professional-looking graphics application.

D–PICT/GraphKit, useful for adding a superior business graphics capability to a system, is intended for system building, OEMs, and application designers. The package has a manageable number of subroutines and an easy-to-use programming syntax. No disk files are required, eliminating any conflicts or burdens on host systems with multiple disk files, and no restrictions are made on the form of incoming data.

Graphics can be output to many graphics devices. More the 100 devices are supported.

Price: $12,000

Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

D–PICT/LAYOUT

Operating System: VMS

Keywords: • CAD/CAM • Development tools
• Presentation aids

D–PICT/LAYOUT, a keyword-driven graphics design package, can be used for the quick creation and viewing of high-quality graphics. Parts of the layout can be created by direct command entry; other, previously designed parts can be recalled from storage for reuse. The two modes can be used simultaneously.

Instructions or keywords for D–PICT/LAYOUT designs, similar to English sentences, enable users to create complex illustrations, logos and symbols, framing and titling for existing graphics, text/word charts, bubble charts, Venn diagrams, room layouts, forms and diagrams, and much more. D–PICT/LAYOUT provides a variety of fast and accurate graphics usable at all levels in your organization.

Graphs can be output to many graphics devices. More than 100 devices are supported.

Price: $6000
Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

D–PICT/MESH

Operating System: VMS
Keywords: • Earth resources • Engineering
• Sales and marketing • Scientific

This software package, designed to create 2-dimensional perspective representations of 3-dimensional grid data, is a valuable tool for market researchers, engineers, scientists, and anyone requiring surface projections with hidden-surface removal. D–PICT/MESH enables you to choose your viewpoint and provides a choice of a perspective or parallel projection. Additionally, two data grids may be used together to define the upper and lower surfaces of a "solid." You may also specify a free-floating or base-connected mesh.

A "visibility matrix" defines which of the original data points are visible from the current viewpoint. Optionally, this matrix can be used to overlay or superimpose other graphics output onto the visible surface.

D–PICT/MESH can also be used by inexperienced users. The package's layered menu system guides users to enter the required information. More experienced users, however, may take advantage of the callable subroutines to achieve sophisticated results.

Graphs can be output to many different graphics devices. More than 100 devices are supported.

Price: $4000
Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

D–PICT/META

Operating System: VMS
Keywords: • Development tools • Presentation aids

D–PICT/META, a powerful graphics composition utility, can merge up to 500 graphics components and create a single presentation-quality display. In addition, each component can be shifted, scaled, rotated, and windowed to create the desired result. D–PICT/META's highly versatile menu system guides you through the process, presenting options

from which to choose or asking for specific information. Even novices can create a diverse range of quality compositions without having to learn programming commands.

D–PICT/META handles several metafiles at once, displays metafile pictures in any order, positions and scales pictures on the display device automatically, allows picture modeling and viewing in user-defined units of measure, adds borders and cut marks, and uses hardware features, including TEXT and AREA FILL, where available (and desirable) to reduce display times.

Graphs can be output to many graphics devices. More than 100 devices are supported.

Price: $2500

Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

D–PICT/VGL

Operating System: VMS

Keywords: • Mapping • Presentation aids • Programming tools • Simulation

D–PICT/VGL (Virtual Graphics Library) is a powerful library of graphics subroutines and utilities for the creation of device-independent graphics software applications. This package is written in FORTRAN–77 and contains more than 250 subroutines. D–PICT/VGL provides the tools for any graphics application, including both 2-D and 3-D graphics, and presents this capability to the application programmer in an easy-to-understand, easy-to-use system. With D–PICT/VGL, the user can implement graphics applications or add graphics to an existing application in days rather than weeks or months. Extensive color tables, pattern tables, and markers are available to enhance any graphics presentation.

D–PICT/VGL can be installed on your computer system in less than 15 minutes. Dataplotting provides two comprehensive tutorial manuals with programming examples for both 2-D and 3-D applications, which may be used as a guide for more advanced applications.

The graphics output can be displayed on a variety of graphics devices. More than 100 devices are supported.

Price: $8000
Contact: Brian Diamond
(416) 441–4163
DATAPLOTTING SERVICES INC.
225 Duncan Mill Road
Don Mills, Ontario M3B 3K9
Canada

Data Connection™

Operating System: MicroVMS, VMS
Keywords: • Decision support • File transfer • Presentation aids • Report writer

Memory required: virtual system, 1MB. Distribution medium: magnetic tape.

This integrated family of software tools accesses data for graphical display by TELL–A–GRAF and also manipulates data for the most effective graphical output. A key member of this family is File Connection, which can automatically access data files produced by many different application software packages.

The Data Connection, written in FORTRAN, includes File Connection, which reads files with conventional record formats; Report Connection, which reads tabular reports and prints files; External Program Connection, which directly links TELL–A–GRAF with application programs; and Decision Support Connection, which edits and modifies graphics-input data.

Price: $5000 – $16,500
Contact: Jeff Anderson
(619) 450–0881
ISSCO
10505 Sorrento Valley Road
San Diego, CA 92121

DATAPLOT™

Operating System: VMS
Keywords: • CAD/CAM • Engineering • Mathematics

This valuable tool is for not only raw graphics but also manuscript preparation, modeling, data analysis, data summarization, and mathematical analysis. DATAPLOT may be run either in batch mode or interactively, although it was designed primarily for, and is most effectively used in, an interactive environment. DATAPLOT graphics may appear on many types of output devices. Due to its modular design and underlying ANSI FORTRAN (PFORT) code, DATAPLOT is portable to a variety of computers.

DATAPLOT has the following capabilities: general graphics, diagrammatic graphics, fitting, graphical data analysis, nongraphical data analysis, and mathematics.

DATAPLOT™ is a trademark of the National Bureau of Standards, U.S. Department of Commerce.

Price: $985

Contact: Wally Finch
(703) 487–4807
NATIONAL TECHNICAL INFORMATION SERVICE
5285 Port Royal Road
Springfield, VA 22161

DATAVIEWS™

Operating System: MicroVMS, ULTRIX–32, VMS

Keywords: • Engineering • Process control • Scientific • Simulation

This general-purpose graphics display software system allows users to build displays of dynamic data streams quickly and easily. Without programming, users may construct multiple screens, using a variety of viewports and formats, and may display any combination of variables, as required by the application. Formats include bar, pie, and strip charts; line graphs; dials; meters; radial plots; scatter plots; web diagrams; vector plots; flowfields; and surface plots. Applications include simulation, process monitoring and control, instrumentation, computer-integrated manufacturing, scientific research, command and control, and business and finance.

Price: Available upon request

Contact: Cheryl McDermott
(617) 485–6092
VISUAL INTELLIGENCE CORP.
33 Boston Post Road West
Marlboro, MA 01752

DATS

Operating System: VMS

Keywords: • Data collection • Mapping • Signal processing • Statistics

DATS is a modular software system for collection, manipulation, analysis, and display of signal and time-series data. More than 80 powerful, flexible, secure, extendable modules exist for data acquisition, processing, and graphic display. The graphic facilities incorporate 3-D display facilities.

DATS provides a powerful, tractable, easily operated system to personnel with very limited computer knowledge. Each module is individually implemented and carries out a single function. A simple mechanism enables the user to determine and use a sequence of modules called a JOB. The level of user interaction and control can be

determined during JOB preparation. A JOB may incorporate lines of standard code, although the flexibility of DATS obviates that requirement in most cases.

DATS operates in a time-sharing multiuser environment. The system incorporates a wide variety of facilities, including numerous subroutines to facilitate the development of new modules. Those facilities and time-sharing features give the system considerable power in program development without inhibiting the signal analysis function.

The package includes training, installation, a year of software and manual updates, and telephone support. DATS is available for the RSX–11–M, RT–11, P/OS, and VMS operating systems.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Dr. Colin Mercer
(0329) 232658
PROSIG COMPUTER CONSULTANTS LTD.
Link House, High Street
Fareham, Hants PO16 7BQ
England

DECgraph

Operating System: MicroVMS, VMS
Keywords: • Decision support • Presentation aids

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

VAX DECgraph is a general-purpose graphics plotting package that allows users to create, change, display, and print graphs. Individuals can use VAX DECgraph for decision support and presentations.

Refer to SPD #26.07.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: $500 – $3750
Contact: Consult your local DIGITAL sales office (see Introduction).

DECOR (Core Graphics System)

Operating System: MicroVMS, VMS
Keywords: • Device drivers/handlers • Presentation aids
• Programming tools

Distribution media: RX01, TU58 DECtape II cartridge.

VAX DECOR is a graphics subroutine package that provides an interface between an application program and graphics devices. The interface is device independent and supports user-developed device handlers, as well as those supplied with VAX DECOR. VAX DECOR

includes commonly required device handler routines and detailed documentation designed to guide and assist in the development of user-specified device handlers.

VAX DECOR is based on the ACM/SIGGRAPH Graphics Standard Planning Committee's 1979 "Core Graphics Proposal" and includes 2-D direct and buffered output (level 2), a subset of synchronous input (level 2), and most "Raster Extensions."

Refer to SPD #25.05.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $3000 – $6000

Contact: Consult your local DIGITAL sales office (see Introduction).

DECslide

Operating System: MicroVMS, VMS

Keywords: • Presentation aids • Text management

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

This menu-driven graphics presentation utility is for users who create or prepare materials for in-house presentations. Both symbols and text are used for menu selection.

VAX DECslide uses an interactive interface to display diagrams and text being entered. Editing functions permit changes to slides being created or saved.

A strip (text) menu and message area at the bottom of the screen displays user options, help messages, and operation status. A directory feature lists the slides, including the date and time of creation, slide name, and comments.

Slides can be colored with available color palettes. The slides can be printed (single- or double-size format), saved (filed), copied, exported, changed, or deleted.

Refer to SPD #26.11.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $500 – $3750

Contact: Consult your local DIGITAL sales office (see Introduction).

DI–3000®

Operating System: VMS

Keywords: • Presentation aids • Software utilities

Distribution medium: magnetic tape.

This integrated system of graphics tools, developed as a package of 160 user-callable subroutines, is device and machine independent. The system, written in FORTRAN, offers a comprehensive set of features, including full color, complete 3D, area fill and patterning, graphic arts–quality text, snapshot debugging, and picture metafile. DI–3000

also supports a wide range of interactive development tools for digitizing, menu functions, and computer-aided design. System design is based on a networking structure, making DI–3000 ideal for multitasking and for distributed-processing environments. The network also allows application program interaction with several graphics devices concurrently. Using intelligent device drivers, DI–3000 takes advantage of the hardware features of the graphics.

Price: $5500 – $26,500
Contact: Rob Look
(303) 530–9000
PRECISION VISUALS, INC.
6260 Lookout Road
Boulder, CO 80302

DI–TEXTPRO

Operating System: VMS
Keywords: • Presentation aids • Text management

Distribution medium: magnetic tape.

DI–TEXTPRO, written in FORTRAN, makes publication-quality text available to applications built using Precision Visuals' graphics toolbox, DI–3000. DI–TEXTPRO produces quality text of any size and color in 20 typefaces. Subroutines have been carefully designed to be fully compatible with other DI–3000 text, which simplifies integration with existing applications and eliminates any training overhead.

Other DI–TEXTPRO features include full compatibility with Precision Visuals' business graphics toolbox, GRAFMAKER; a unique "previewing" mode for fast development and a high-quality "final-copy" mode; automatic superscripts, subscripts, and underlining; 2-D and 3-D text; context-dependent character spacing, or "kerning"; string-extent routines for easy boxing of text strings; support for all text attributes — gap, path, justification, size, baseline, and plane; and support for FORTRAN–66 and FORTRAN–77 interfaces.

Price: $1500 – $4800
Contact: Rob Look
(303) 530–9000
PRECISION VISUALS, INC.
6260 Lookout Road
Boulder, CO 80302

DIP–10 Plus

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers
• Presentation aids • Programming tools

DIP–10 Plus, developed by Advanced Technology Center, enables PLOT–10 programs to run on any graphics display device. That process does not involve any program conversion. DIP–10 Plus device-independent routines map directly into PLOT–10 routines.

Raster displays, plotters, printers, film recorders, directed-beam refresh displays, and storage tubes are supported. Device drivers for most of the popular devices are available off the shelf.

Price: $2200
Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

DISSPLA

Operating System: MicroVMS, ULTRIX–32, VMS
Keywords: • Mapping • Presentation aids • Software utilities
Memory required: virtual system, 1MB. Distribution medium: magnetic tape.

DISSPLA is a high-level interactive and batch plotting language designed to meet the data representation needs of scientists, engineers, and financial and marketing personnel. DISSPLA offers flexibility and programmer friendliness. Device and computer independence are part of DISSPLA's integrated FORTRAN graphics subroutine library, which allows the creation of graphs, charts, maps, contours, and surfaces.

Price: $9500 – $40,000
Contact: Rick Kreysar
(619) 452–0170
ISSCO
10505 Sorrento Valley Road
San Diego, CA 92121

DMG/FLOW

Operating System: VMS
Keywords: • Development tools • Presentation aids
• Programming tools • Text management
Distribution medium: 9-track 800/1600 bpi magnetic tape.

This system graphically produces and edits tree-structured designs. Although directed primarily toward systems and program designers, DMG/FLOW is an excellent package for users who create, modify, and print diagrams that are based on tree structures — for example, functional system design, menu hierarchies, management and organization charts, data base design (tree only), and program design.

DMG/FLOW provides an easy-to-use editor that manipulates boxes on a VT100 screen. Interim designs or alternatives can be stored on disk and recalled later. Standard DIGITAL printers with no special graphics capability are used. The hard-copy diagrams can be incorporated into the system documentation, eliminating tedious redrawing of working diagrams. DMG/FLOW requires a VT100 with the AVO option. Selected terminals that emulate the VT100 with AVO may be used. No special printer is required, but some printers produce better-quality diagrams than others. Contact DMG for advice.

DMG/FLOW verifies design structures and will not allow syntactical or other inconsistencies that might arise. Full 132-character width is supported, and DMG/FLOW provides the facility to link multipage diagrams with cross-page references. Header boxes maintain creation and revision dates for each page in a diagram.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $2000

Contact: Ken Allsopp
(416) 225–7788
DIGITAL MANAGEMENT GROUP LTD.
4800 Yonge Street
Willowdale, Ontario M2N 6G5
Canada

Driver for 11C03

Operating System: VMS

Keywords:
- Asynchronous communication
- Device drivers/handlers
- Networking
- Telecommunications

The VAX Driver for 11C03 provides a DMA interface for up to eight serial line graphics terminals running on the VAX/VMS operating system and supports rapid image generation during interactive design sessions on compatible graphics terminals. The VAX Driver for 11C03 uses variable-length block DMA transfers for output data to reduce the VAX CPU loading imposed by high data rates to the serial lines. The DMA output to an LSI–11 contained in the 11C03 forms a buffered data interface that uses the LSI–11 to service each serial line with character data while the VAX/VMS system and user programs continue with other processing. The 11C03 support of asynchronous serial lines does not provide for modem control or software control of baud rates.

Features include:

- Automatic selection of block-mode DMA data output when the data block contains two or more characters.

- A maximum total data output capacity — shared by all active terminal lines when input is inactive — of 20,000 characters a second. The maximum input capacity is 1000 characters a second, also shared by all active terminal lines when output is inactive.
- A time-sharing diagnostic that provides assistance to service personnel while minimizing the disruption of 11C03 and/or other VAX terminal users.
- Control of up to four 11C03 interfaces — a total of 32 serial line ports.

Refer to SPD #25.56.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $18,500

Contact: Consult your local DIGITAL sales office (see Introduction).

DRWLIB

Operating System: VMS

Keywords: • Mapping • Presentation aids

This library of FORTRAN-callable subroutines for graphics output to display terminals and graph plotters has a variety of device drivers so that the same subroutines can be used, without amendment, across the whole range of supported devices. DRWLIB not only incorporates line drawing, pen control, shading, axis drawing, pie charts, and other such graphics facilities but also supports many different color terminals and multipen plotters concurrently. Any picture drawn on a graphics terminal may be sent to a plotter by changing the parameters of just one subroutine. DRWLIB contains more than 30 subroutines for initializing basic movement, text and numeric output, virtual window, and line and curve drawing.

DRWLIB graphics terminal support includes Tektronix 4010, 4025, and 4100 series; Westward W1000 and W2000 series; Lynwood Alpha; Retrographics; DACOLL; VT100; Selinar VT100; Lear Seagler Graphics Upgrades; HP2645, and DIGITAL VT125. Plotter support includes CalComp 81, Servogor 281, Hewlett-Packard HP7221, CIL series, Watanabe series, Benson, and Versatec V80.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Margaret Symes or Chris Evans
(0329) 232658
PROSIG COMPUTER CONSULTANTS LTD.
Link House, High Street
Fareham, Hants PO16 7BQ
England

DUCTSYS — HVAC Ductwork and Fittings Drawing System

Operating System: VMS

Keywords: • Architecture • CAD/CAM

This set of interactive programs aids in creating double-line HVAC drawings. Developed on Intergraph CAD systems, DUCTSYS routines enable the user to place pipe and fittings easily and accurately. The flexible programs are a supplement to the standard Intergraph capabilities. The minimizing of key-ins, the use of defaults, and the use of a pictorial menu make DUCTSYS easy to learn and use.

DUCTSYS allows placement by centerline or left/right edge (justification), easy changes in default values, and multiuse of the system. The user can perform any graphics command between duct placements, and duct symbology can also be used for piping and cable trays applications. A duct can be shortened/lengthened with one command or can be placed over an existing line to allow the tracing of a previously defined path. The user can delete the last fitting placed and can reset the design parameters. The system remembers current cross-sectional shape, justification, and direction of the last fitting or duct placed. DUCTSYS requires no cell library, drawing everything with UCMs, and draws a duct between fittings automatically.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Debra P. Bressler
(713) 266–0000
EGT, INC.
11011 Richmond, Suite 700
Houston, TX 77042

E Z Chart

Operating System: VMS
Keywords: • Data base management • Menu handlers
• Presentation aids • Query facilities

This complete chart generator for DIGITAL PDP–11, LSI–11, and VAX systems is menu driven and highly intelligent. E Z Chart reduces virtually any sequential file to a properly scaled and labeled chart in minutes. The package runs interactively in a simple question-and-answer format. E Z Chart automatically summarizes large amounts of data and determines the scale of the chart to present best results.

This chart generator is geared to any industry that requires charts and graphics. E Z Chart is an enhancement product for the LA120 dot-addressable graphics and DIGITAL's LA12, LA34, LA50, and LA100 printers.

A version of this product is available for the PDP–11 computer.

Price: $995 – $1750
Contact: Alfred Rotatori
(617) 449–5808
TEXPRINT, INC.
220 Reservoir Street
Needham Heights, MA 02194

Easel

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Device drivers/handlers • Management • Report writer • Text management

Easel allows technical personnel to create icon-based interfaces for any applications. The program lets the end user communicate with computers, using a pointing device, such as a mouse or a touch-sensitive screen. Easel translates those touches into appropriate commands that control local or remote applications programs. Easel can also intercept the text output of applications and translate it into any graphic images desired.

Easel can be used with any software, without requiring any changes to the applications.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $1000 – $15,000
Contact: —
(617) 938–8440
INTERACTIVE IMAGES, INC.
600 W. Cummings Park
Woburn, MA 01801

EDIGRAF — Batch Edit for Intergraph Design Files

Operating System: VMS
Keywords: • CAD/CAM • Text management

This general-purpose graphics file-editing program, developed for Intergraph CAD systems, can replace selected cells (by name) in a design file, change font or text size of selected text strings, modify the line weight of elements on certain levels, and perform global text edits on several design files. EDIGRAF enables the user to select, by type, color, level, weight, font, class, and so forth, which graphics elements are to be edited. Then the system will modify the indicated design file(s). In the alphanumeric mode, multiple-design files can be affected, if desired. Within graphics, the elements in the current file that are contained in the user-defined fence will be modified.

With operational modes from either a graphics-design station or a low-cost alphanumeric terminal, EDIGRAF offers substantial productivity gains when performing large numbers of repetitive edits.

A version of this product is available for the PDP–11 computer.

Price: $3500
Contact: Debra P. Bressler
(713) 266–0000
EGT, INC.
11011 Richmond, Suite 700
Houston, TX 77042

EXHIBIT Business Graphics

Operating System: VMS
Keywords: • Presentation aids

Distribution medium: 1600 bpi magnetic tape.

This easy-to-use business graphics package plots charts and graphs. EXHIBIT uses a simple declarative language and English-language commands and requires no programmer intervention. Features include many types of high-quality charts — pies, bars, graphs, lines, text, and combinations; full color support for up to eight colors; and many quality type fonts, fill patterns, line styles, and chart formats. A wide range of plotters is supported. The package can be commanded from any computer terminal — not just raster CRTs — and accepts data from TIPS word processing, C–CALC, and SuperComp-Twenty spreadsheets. Both menu mode and command mode are available, and the software is very flexible to allow design considerations.

A version of this product is available for the PDP–11 computer.

Price: $3900 – $7500
Contact: Diana Slocombe
(415) 494–7500 or Telex: 469855
IPT CORP.
1096 E. Meadow Circle
Palo Alto, CA 94303

FDV/CC (Form Driver and Cluster Controller for FMS–11)

Operating System: VMS
Keywords: • Forms management • Telecommunications

FDV/CC, the Forms Machine, is a remote forms server and terminal-cluster controller for use with DIGITAL's FMS–11 Forms Management System. FDV/CC removes the overhead of screen handling from your PDP–11 or VAX by off-loading the FMS form driver function from the host to a small, dedicated LSI–11/23. The LSI controls a remote cluster of up to 16 terminals, using only one host line. FDV/CC is fully compatible with both new and existing FMS–11 application programs and uses DIGITAL-maintainable hardware.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $14,000
Contact: Ronald Tepper, President
(212) 695–5001
RGTI SYSTEMS SOFTWARE
One Penn Plaza
New York, NY 10001

FSS 3000 (FORTRAN Support Subroutines)

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers • Engineering • Programming tools

FSS 3000, a package of high-level FORTRAN-callable subroutines, provides an efficient interface between the Adage 3000 Color Raster Display System and device-independent application software packages. FSS 3000 requires an Adage 3000 Color Raster Display System connected to a host minicomputer. Two versions of FSS 3000 are available: FSS 3000G requires that the 3000 be equipped with the Adage GPS Graphics Processor Set; FSS 3000A requires that the 3000 be equipped with the Adage AGG4 Advanced Graphics Generator.

Features of FSS 3000 include local hidden-surface display and removal; interactive solid modeling; real-time, antialiased, 3-D vector display, and fast raster operations; graphics primitives; polygon fill; standard Adage host drivers; and an optional extension to include user-defined functions.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

GAM (Graphic Access Method)

Operating System: VMS
Keywords: • Device drivers/handlers • Programming tools • Real time

This graphics input/output handler provides graphics programming services for the assembler language programmer. GAM allows full interaction between a program and a graphics station. A station is referenced from the graphics program as any other peripheral device. GAM controls the user/machine interaction in the display environment and provides system integrity without impeding station interaction. GAM achieves those purposes by functioning as a handler rather than as a modification to the operating system.

A version of this product is available for the PDP–11 computer.

Price: $500 – $5325
Contact: Janice Wheaton
(818) 346–0549
INTERACTIVE GRAPHIC SYSTEMS, INC.
P.O. Box 1305
Woodland Hills, CA 91365

GC400 (Graphics Peripheral Console Handler)

Operating System: VMS
Keywords: • CAD/CAM • Communications
• Device drivers/handlers

GC400 allows the Adage 4100 Work Station to function as the system console for the host minicomputer connected to the 4100. GC400 requires an Adage 4100 Work Station connected to a host minicomputer. The 4100 must also be equipped with the Adage GP400 Graphics Peripheral Device Handler.

A version of this product is available for the PDP–11 computer.

Price: $750
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

GCPLOT

Operating System: VMS
Keywords: • Aeronautics/aerospace • Automotive • CAD/CAM
• Mapping

Distribution media: 9-track 800/1600 bpi magnetic tape; others on request.

GCPLOT is a set of FORTRAN subroutines, such as PLOT, FACTOR, and NEWPEN, for generating the Kongsberg plot format.

Price: NKR 10.500
Contact: Hans Engfelt
47–3–73 82 65
A/S KONGSBERG VAPENFABRIKK
Data Systems Division
P.O. Box 25
N–3601 Kongsberg
Norway

GCS (Graphics Compatibility System)

Operating System: VMS
Keywords: • Civil engineering • Programming tools

This FORTRAN-based graphics system is designed for interactive use on a variety of graphics terminals. Due to its comprehensive and modular design, GCS provides a simplified easy-to-learn and easy-to-use approach to computer graphics. This powerful tool can be used by the sophisticated programmer for demanding and highly interactive graphical applications.

GCS provides compatibility at two distinct levels: cross-compatibility from one computer system to another and cross-compatibility between computer graphics terminals. The cross-compatibility from one terminal to another is transparent to the user, who need no longer be concerned about the problems of tailoring programs for a given graphical device. Device independence provides the user with the option of preparing and debugging a graphics program on a terminal other than the type to be used for final output.

GCS is a unified system that provides the user with the flexibility to perform tasks at any level of involvement. Thus, GCS can also be thought of as user compatible. High-level, composite routines are provided to perform relatively complex but frequently required tasks, such as the preparation of complete graphs and histograms.

GCS is available in two versions: the 3-dimensional version is a sophisticated, highly capable package with graphical data structures, text processing, and 3-dimension graphics; the 2-dimensional version, older and less sophisticated, offers the benefits of a smaller central memory requirement and a higher execution speed and fulfills most of the normal graphics requirements. In general, the 2-dimensional version is a proper subset of the 3-dimensional version.

Price: $1500

Contact: Wally Finch
(703) 487–4807
NATIONAL TECHNICAL INFORMATION SERVICE
5285 Port Royal Road
Springfield, VA 22161

GDL (Graphic Display Library)

Operating System: VMS

Keywords: • CAD/CAM • Programming tools • Real time • Simulation

This interface with the display environment is a reentrant resident library of callable subroutines that provides graphics programming services to help the application programmer create and manipulate graphics displays. GDL subroutines address one or more graphics display stations attached to any computer supporting IGS's GAM. A graphics display station is defined as a CRT monitor and any combination of interactive devices associated with it.

The modular, open-ended subroutines in GDL promote rapid application software development and allow for extending GDL. GDL is designed to relieve the programmer of the responsibilities of handling the graphics station, while allowing complete access to all the hardware features. GDL permits multiple display stations to be controlled from multiple programs. GDL also allows the station to be used as an input device. Inputs can be generated by the alphanumeric keyboard, function keys, light pen, or other input devices.

A version of this product is available for the PDP–11 computer.

Price: $6100 – $9300
Contact: Janice Wheaton
(818) 346–0549
INTERACTIVE GRAPHIC SYSTEMS, INC.
P.O. Box 1305
Woodland Hills, CA 91365

Gear

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Engineering • Manufacturing • Mechanical engineering

Memory required: 64K minimum.

This program, written in MACRO, calculates and plots gears, based on user responses to prompts for diametral pitch, number of teeth, and pressure angle. The program optionally provides the data necessary to mesh groups of gears on a drawing. The Gear program applies to any process involving gear design and provides an accelerated design process, quick calculations from user data input, and gear meshing for geometry.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

GIGI CAI Primer

Operating System: VMS
Keywords: • Computer-aided instruction

Distribution media: 9-track 800/1600 bpi magnetic tape, RK07, RL02, RX01, TU58 DECtape II cartridge.

This computer-assisted instruction course on the use of a GIGI terminal presents instruction on line through a GIGI terminal connected to a RSTS/E, a VAX/VMS, or a TOPS–20 operating system host. The course is composed of three instructional modules that cover the operation of the GIGI keyboard, the use of various set-up modes that determine GIGI's operating characteristics, and a demonstration of the terminal's graphics capabilities. The course takes about one hour to complete.

Refer to SPD #30.11.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

GIGI Software

Operating System: VMS
Keywords: • Education • Financial analysis • Statistics • Text management

This set of host-resident graphics packages written in FORTRAN supports a range of educational applications on the GIGI terminal. The software is distributed with hardware or alone.

Two combined hardware and software packages are available. Package A consists of the GIGI Graphics Editor, the GIGI Character Set Editor, and the GIGI Slide Projection System. Package B comprises specific applications using the GIGI terminal: GIGI DEC–RITE, GIGI Data Plotting Package, and GIGI ReGIS Application Library.

The GIGI Character Set Editor allows users to construct alternate character sets of up to 95 characters each. The character sets are stored in files on the host system and may be down-line loaded into any of the terminal's three alternate character sets.

Symbolic and foreign language character sets are used in such disciplines as mathematics, chemistry, and Greek. The package allows non-technical users to create, load, and use character sets. The Editor provides commands for creating and manipulating character set files and for controlling screen display during editing. In addition, the user can define a character set, using combinations of available characters to form multiple-character mosaics.

The GIGI Slide Projection System allows the user to display existing Remote Graphics Instruction Set (ReGIS) picture files. The GIGI Slide Projection System works like a slide projector and can be used in both the sciences and the humanities to prepare class materials and presentations.

GIGI DEC–RITE (ReGIS Illustrated Text Editor) is an on-screen editor providing interactive text-attribute selection and optional final copy from GIGI connected to a DECwriter IV Graphics Printer.

The GIGI ReGIS Application Library is a set of subroutines for applications developed for the GIGI terminal. The library gives the user most of the standard Remote Graphic Instruction Set (ReGIS) functions in the terminal.

Refer to SPD #30.10.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.
Price: $240 – $1000
Contact: Consult your local DIGITAL sales office (see Introduction).

GIGI Tool Kit

Operating System: VMS
Keywords: • Data conversion • Development tools • Programming tools

The GIGI Tool Kit (VMS) contains the following tools:

- HC2X, to generate double-size hard copy on the LA34VA printer, from a file of ReGIS graphics
- DIGITZ, to use the Summagraphics Bit Pad to digitize a hard-copy image, generating a ReGIS file
- DIGITIZE, a version of DIGITZ that runs in GIGI BASIC
- RBOS, to support the GIGI BASIC, SAVE, and HOST commands, using the host as a file saver
- PROGKEY, to help the user to program GIGI's programmable keys
- PCU, a pie chart utility for generating pie charts from data files
- COPYSHOW, a VMS DCL procedure to copy a GIGI Slide Projector tray file plus all ReGIS files referenced by it

Documentation is on magnetic media. DECUS number VAX–22.

Price: $5 – $225
Contact: DECUS (see Introduction)

GINO

Operating System: MicroVMS, ULTRIX–32, ULTRIX–32m, VMS
Keywords: • Development tools • Mapping • Programming tools

This subroutine library enables you to add graphics to a program quickly on almost any computer. GINO contains drawing and administrative routines for 2-D and 3-D displays. Simple calls are used to produce and manipulate pictures, providing a fast and efficient means of visualizing ideas and solving problems.

GINO's modular structure allows you to change graphics peripherals easily. It can drive a variety of terminals — color, raster, vector refresh, and storage tube — ranging from dumb terminals to sophisticated workstations and can drive hard-copy devices, ranging from simple pen plotters to laser and electrostatic printers.

GINOGRAF is a subroutine library for pie charts, graphs, bar charts, and histograms. You can draw any of these scaled, fully annotated, and framed by supplying data and calling a single routine. GINOSURF is a subroutine library providing facilities for displaying 3-D surfaces as contour maps or as isometric projections.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Lynne Skelly
(0223) 314848
CADCENTRE LTD.
High Cross, Madingley Road
Cambridge CB3 0HB
England

GIPSY (General Image Processing System)

Operating System: ULTRIX–32, VMS
Keywords: • Engineering • Medical • Research • Scientific
Memory required: 250KB. Distribution medium: magnetic tape.

Developed by Virginia Polytechnic Institute and marketed by Vicom Systems, Inc., this user-friendly interactive image-processing package works with single or multiband images in integer or real format. GIPSY includes more than 300 commands to perform image filtering, classification, geometric spatial transformations, numeric and symbolic recursive and nonrecursive neighborhood operations, spatial clustering, region growing, and property-file generation. Documentation is on line and available through GIPSY commands. User interaction with GIPSY is accomplished with a command string, followed by questions and answers. The result of user interactions on each image is kept permanently as part of the image in history records.

GIPSY is written primarily in FORTRAN (Ratfor), with some sections in assembly language.

Price: $25,000
Contact: William F. Bryant
(408) 946–5660
VICOM SYSTEMS, INC.
2520 Junction Avenue
San Jose, CA 95134

GIPSYS (Graphical Input and Plotting System)

Operating System: MicroVMS, VMS
Keywords: • Architecture • Engineering
Memory required: 2 megabytes. Distribution medium: magnetic tape.

GIPSYS, written in FORTRAN–77, is a 2-D computer-aided drafting system featuring ease of use and a general-purpose capability.

Price: Available upon request
Contact: Dr. Paul Lyons
(01) 353–2441
FINITE ELEMENT ANALYSIS LTD.
25 Holborn Viaduct
London EC1A 2BP
England

GK–2000

Operating System: VMS
Keywords: • Application development • Software utilities
Distribution medium: magnetic tape.

This graphics tools package, written in FORTRAN and consisting of more than 190 user-callable subroutines, enables programmers to develop 2-D applications that are independent of a specific output device. The package's capabilities meet and exceed the ANSI GKS specifications and include interactive 2-D image manipulation, support for up to 11 concurrent device drivers, 24 stroke-precision fonts, 256 line types, and a full range of graphics input devices. Features specific to the GKS standard include workstation windowing/viewporting, exact image sizing, convenient bundling of attributes, segmentation capabilities, and cell arrays. Several productivity enhancements have been added to GK–2000 that go beyond the GKS standard and make it a working tool, such as extended error processing, pause function, and file name control.

Price: $4500 – $21,000
Contact: Rob Look
(303) 530–9000
PRECISION VISUALS, INC.
6260 Lookout Road
Boulder, CO 80302

GKS–GRAL

Operating System: ULTRIX–32, VMS
Keywords: • CAD/CAM • Process control • Programming tools • Scientific

GKS–GRAL, developed by GTS/GRAL, is a full implementation of the ISO Standard Graphical Kernel System, consisting of a library of FORTRAN–77 subroutines. GKS offers capabilities for creating 2-dimensional pictures, handling input from graphical workstations, and structuring, manipulating, storing, and retrieving pictures.

GKS–GRAL supports different device drivers by adapting to each graphics driver, emulating GKS functions that do not exist and making the best use of existing functions. Thus, GKS–GRAL can be used on simple plotters and on powerful graphics workstations with display file and hardware operations. GKS–GRAL is configured in GKS level 2b, which provides GKS output, attribute and segmentation functions, and the REQUEST input functions on multiple workstations, accessible at any time.

GKS–GRAL is available on an end-user (single copy or corporate) or OEM basis. Documentation, installation, and training are available.

A version of this product is available for the PDP–11 computer.

Price: $4000 – $15,000
Contact: Kent Anderson
(612) 893–1350
GIXI INC.
7808 Glenroy Road
Minneapolis, MN 55435

GKS/0b (Graphical Kernel System)

Operating System: MicroVMS, VMS
Keywords: • Development tools • Programming tools

Distribution media: 9-track 1600 bpi magnetic tape, RX01, RX50, TU58 DECtape II cartridge.

VAX GKS/0b is a development tool that application programmers can use to produce computer-generated pictures. Packaged as a VAX/VMS shareable image, this subroutine library implements the ISO and ANSI GKS standard for 2-dimensional device-independent graphics. Any VAX/VMS language that supports the VMS calling convention can call VAX GKS. VAX GKS/0b conforms to level 0b of the GKS standard, which provides direct output (level 0) and synchronous input (level b) capabilities. VAX GKS/0b provides the application programmer with a single interface to a variety of graphics devices.

Refer to SPD #26.20.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $2100 – $3150
Contact: Consult your local DIGITAL sales office (see Introduction).

GKS/C

Operating System: Independent, ULTRIX–32, ULTRIX–32m, VMS
Keywords: • Device drivers/handlers • Programming tools

GKS/C is a speed-optimized and memory-optimized C implementation of GKS (Graphics Kernel System) to level 2b of the ISO standard. GKS/C can be ported onto the VAX, PDP–11, Motorola 68000, Ridge, and IBM PC/XT computers. The product was codeveloped with the Mathematical Center of the Netherlands, and we have added value by adding ports and drivers, by speeding up the package, and by liberally commenting the source code. Some routines have been implemented in microcode for certain customers.

A version of this product is available for the PDP–11 computer.

Price: $300 – $20,000
Contact: Ahmed Bashir, P. Eng.
(613) 820–7235
PRIOR DATA SCIENCES LTD.
Bell Mews Plaza, 39 Highway 7, Suite 232
Ottawa, Ontario K2H 8R2
Canada

GKS/Ob MicroVMS VS

Operating System: MicroVMS
Keywords: • Device drivers/handlers • File management

Distribution medium: RX50.

This subroutine library is packaged as a VMS shareable image that implements the ISO and ANSI GKS standards for 2-dimensional, device-independent graphics. VAX GKS/Ob MicroVMS VS conforms to level Ob of the GKS standard, which provides direct output (level 0) and synchronous input (level b) capabilities.

VAX GKS/Ob MicroVMS VS provides the application programmer with a single interface to a variety of grahics devices. Application programmers can use this development tool to produce computer-generated pictures. Any VMS language that supports the VMS calling convention can call VAX GKS.

VAX GKS/Ob MicroVMS VS allows the user to define the working coordinate system (world coordinates). The user can also control multiple simultaneous views of the same picture on separate display surfaces as well as the position of the picture on the surface.

VAX GKS/Ob MicroVMS VS provides an interface to sequential files, the ISO suggested GKS Metafile (GKSM), for filing graphical information. The library also provides a series of stroke precision character fonts.

MicroVMS/VSI is prerequisite.

Refer to SPD #28.07.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

GP400 (Graphics Peripheral Device Handler)

Operating System: VMS
Keywords: • CAD/CAM • Communications
• Device drivers/handlers

GP400 creates the software interface between the Adage 4100 Work Station and the processor in a host minicomputer. GP400 requires an Adage 4100 Work Station connected to a host minicomputer.

A version of this product is available for the PDP–11 computer.

Price: $1750
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

GPL (Graphics Programming Language)

Operating System: VMS
Keywords: • CAD/CAM • Engineering • Mathematics • Programming tools

GPL, a FORTRAN-based image-generation language, maximizes the power and flexibility of the Adage 4100 Work Station while maintaining programming simplicity. GPL requires an Adage 4100 Work Station connected to a host minicomputer. User-supplied programs written in GPL typically address the following markets: CAD/CAM, simulation, command and control, finite element modeling, and the analysis of engineering and seismic data.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

GPOTS (Graphics Peripheral Object Time System)

Operating System: VMS
Keywords: • CAD/CAM • Communications • Device drivers/handlers • Programming tools

GPOTS, a set of FORTRAN-callable subroutines, provides a host minicomputer with functional capabilities within the Adage 4100 Work Station. GPOTS requires an Adage 4100 Work Station connected to a host minicomputer; in addition, the 4100 must be equipped with the Adage GPL programming language. GPOTS provides the host with the following capabilities: display-hardware control, dynamic graphic-element construction, interrupt processing, and application program-GPL image communication.

A version of this product is available for the PDP–11 computer.

Price: $2000
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

GPR (Graphics Plotting Routines)

Operating System: VMS
Keywords: • CAD/CAM • Printing • Software utilities

This software provides support for application software that is output to Benson plotter/printers, including electrostatic printer/plotters, thermal transfer plotters, pen/plotters, and color ink/jet plotters with Benson Graphware™ controller products.

GPR produces Benson plotter/printer formats as well as the GKS industry-standard formats based on GKS Metafile (GKSM) from ISO and Virtual Device Metafile (VDM) from ANSI. The GKS implementation includes an ISDP front-end option to allow interfacing to current pen-plotter-oriented application software.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $3000
Contact: Joanne Pearson, Product Marketing
(408) 945–1000
BENSON, INC.
2690 Orchard Park Way
San Jose, CA 951522059

GRAFMAKER™

Operating System: VMS
Keywords: • Presentation aids • Software utilities

This integrated system of graphics tools enables you to design and view line graphs, bar graphs, and pie charts. A chart or graph can be developed modally by using a combination of capabilities, such as annotations, legends, tickmarks, axes, and pie chart segments. Additional features include explosion of pie chart segments, fill or patterning of pie chart segments and bar graphs, metafile output, background color selection, multiple axes, arbitrary axis positioning, filling between two curves on a line graph, background grids, log and natural-log scaling options, and multiple charts or graphs on a single picture. Precision Visuals' DI–3000 system is a prerequisite for GRAFMAKER, which is device and machine independent.

Price: $3500 – $10,000
Contact: Rob Look
(303) 530–9000
PRECISION VISUALS, INC.
6260 Lookout Road
Boulder, CO 80302

GRAFPAK–CORE

Operating System: VMS
Keywords: • CAD/CAM • Process control • Scientific

GRAFPAK–CORE, developed by Advanced Technology Center, features user-callable routines to build and support graphics applications; graphics that deliver functionality to match an application environment; programs for scientific analysis, process control, CAD, typesetting, and business graphics; functional capabilities for application programs; programmer time savings and documentation maintenance; and state-of-the-art graphics software.

The device- and machine-independent features of GRAFPAK–CORE and its modular architecture offer a long-term investment value. You can now analyze and design applications rather than spend time on writing output graphics utilities. OEMs can use this tool to build custom applications.

A version of this product is available for the PDP–11 computer.

Price: $1950 – $8500

Contact: Cheryl Pankratz
(714) 998–6041
MIDCOM CORP.
1940 N. Tustin Avenue, Suite 117
Orange, CA 92665

Graphix–11™

Operating System: VMS

Keywords: • Financial analysis • Financial planning • Management • Presentation aids

Graphix–11 is a business graphics chart generator that produces quality color and black-and-white bar charts, line graphs, pie charts, and scattergrams, using the graphics features of most DIGITAL printing terminals and graphics CRTs. Graphix–11 uses a question-and-answer format to determine the attributes of charts to be produced. Users need no specific programming skills, and many of the optional features default intelligently to produce well-structured output the first time. The package can also recall parameters from a previous chart or can be driven by simple free-form parameters written by another applications program.

Graphix–11 charts feature scaling of axes, allowing the package to quickly summarize large data files into useful form. Scales may also be easily specified.

This unique package uses the graphics capabilities of matrix printers, both in black and white and in color. Shaded areas on charts are created by using sophisticated pattern-fill techniques, giving the user up to 25 patterns from which to select, as well as 14 colors on color devices. The result is a quality chart with a half-tone appearance that photocopies well. Devices supported include LA34, LA50, and LA100 terminals, as well as LA120s with Texprint's add-in DECPLOT and

DECOLOR hardware. VT125s, VT240s, VT241s, and any other ReGIS devices are also supported, as well as the LVP16 6-pen plotter and printers by Trilog, Printronix, Anadex, and DataSouth.

A complete user manual is supplied and is also available separately. A product lifetime warranty is standard, as is telephone support. Software updates are available at a reasonable charge.

This product is distributed in the United Kingdom and Europe by DataTrade, Ltd., Northampton, England.

A version of this product is available for the PDP–11 computer.

Price: $1095 – $2995
Contact: Roger T. Prichard
(215) 925–6690
GEOGRAPHIX, INC.
156 North Third Street
Philadelphia, PA 19106

GS400

Operating System: VMS
Keywords: • CAD/CAM • Communications
• Device drivers/handlers • Programming tools

The Adage GS400 software package, by incorporating four or five different programs, provides powerful software development tools, software utilities, and communications support to any Adage 4100 Work Station connected to a DIGITAL host minicomputer. The GS400 requires an Adage 4100 Work Station connected to a DIGITAL VAX or PDP–11 host minicomputer. The GS400 software compatible with VAX minicomputers includes the following Adage packages: GPL, the Graphics Programming Language; GPOTS, the Graphics Peripheral Object Time System; GP400, the Graphics Peripheral Device Handler; and GC400, the Graphics Peripheral Console Handler.

The version of GS400 compatible with PDP–11 minicomputers includes all the packages for the VAX-compatible software; in addition, the PDP–11 version provides ED400, the Display Text Editor.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $9000
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

HATCH — Crosshatching

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Engineering
Memory required: 64K minimum.

This program, written in MACRO, is a general-purpose routine to produce any number of crosshatch lines at any angle, line width, or line type (dotted, solid, centerline, dashed). Lines can be spaced close or far apart. HATCH can be applied to cutaways and intricate figures, can be used with wide pens to fill in color areas, and can improve business graphics with spectacular effects. HATCH improves appearance in drawings and graphics, provides speed of execution, and contains precise fills and patterns.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

HCGS (Host Computer Graphics Software)

Operating System: VMS
Keywords: • Development tools • Engineering • Printing • Text management

This low-cost alternative for hard-copy generation of charts, diagrams, maps, formatted reports, and other text/graphics data bridges the compatibility gap among Tektronix, CalComp, and DIGITAL graphics users. With HCGS, software written using either CalComp or Tektronix Plot 10 calls can produce text and graphics hard copy in color on DECOLOR LA120 and in black and white on DECPLOT LA120 and other DIGITAL dot matrix printer/plotters. A printing terminal, such as the LA120, can now be converted into a Tektronix or CalComp or DIGITAL-compatible graphics printer/plotter with DECPLOT and HCGS. Thus, the need for expensive vector-data plotters is often eliminated. HCGS is written in FORTRAN, and the kit includes a user's guide, installation instructions, test programs, and sample subroutine information to facilitate systems startup.

A version of this product is available for the PDP–11 computer.

Price: $595 – $795
Contact: Alfred Rotatori
(617) 449–5808
TEXPRINT, INC.
220 Reservoir Street
Needham Heights, MA 02194

HOCUS

Operating System: VAX DSM, VMS
Keywords: • Decision support • Management • Simulation

Memory required: 1MB for a single user.

This powerful simulation system, written in FORTRAN, models discrete and continuous processes. HOCUS is used to study existing systems that need modification or new systems that have many variables, complex relationships, or uncertainties about the data to consider. A high-resolution full-color graphics output facility allows a simulation to be shown in animated form or by snapshots taken at certain points. HOCUS is used to solve problems in brewery design, warehouse design, machine shop layout, labor planning, document handling, hospital design, distribution, foundry operation, port operation, production planning, and energy studies. The system can be distributed in batch and interactive form with optional color graphics.

Price: £18,000
Contact: Rod Pugh
(+44) 78434411
P–E INFORMATION SYSTEMS LTD.
Park House, Wick Road
Egham, Surrey TW20 0HW
United Kingdom

IDL (Display Language)

Operating System: VMS
Keywords: • CAD/CAM • Programming tools • Simulation

IDL, a graphics primitives language, enables the user of an Adage 3000 Color Raster Display System to write display programs that are executed by the 3000's graphics processor. IDL requires an Adage 3000 Color Raster Display System connected to a host minicomputer. In addition, the 3000 must be equipped with the Adage GPS Graphics Processor Set.

IDL includes a cross-assembler that runs on the host computer, plus a set of microcode routines and an interpreter that run on the BPS32/M graphics processor. A FORTRAN diagnostic package and FORTRAN driver software are also included. IDL is particularly appropriate in simulation applications requiring interaction with a set display format.

A version of this product is available for the PDP–11 computer.

Price: $1000
Contact: M. Clare Moulton
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

IGMS (Interactive Graphics Management System)

Operating System: VMS
Keywords: • Mapping • Simulation

This general-purpose interactive graphics software package contains batch-mode utilities that support command graphics functions, such as scaling, rotation, and plotting. IGMS is Tektronix 4014–oriented and operates on DIGITAL 11/23, 11/34, and larger PDP–11 CPUs.

A version of this product is available for the PDP–11 computer.

Price: $25,000
Contact: W. C. Schmidt
(215) 328–1040
BROOMALL INDUSTRIES, INC.
700 Abbott Drive
Broomall, PA 19008

IGOR 1 (Interactive Graphic Operating Resource)

Operating System: VMS
Keywords: • Device drivers/handlers • Pre- and postprocessors • Real time

This multifaceted program allows graphics hardware to be used as an intelligent workstation, as well as to operate as a graphics satellite to a host computer. IGOR is ideally suited for distributed graphics processing systems. IGOR off-loads much of the graphics processing normally handled by hosts. The savings to the host can be up to 90% of the overhead incurred on a normal graphics system. The TTY mode allows the station to communicate with any computer system that uses an RS232C serial interface; or, IGOR 1 may be configured to use a DMA interface, whichever suits the application needs. IGOR 1 is designed in modular format and incorporates structural programming techniques. Thus, IGOR 1 can accommodate the inclusion of new devices, handlers for different types of interfaces, and modifications. However, most users will find IGOR 1 satisfactory in its current configuration.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $4150
Contact: Janice Wheaton
(818) 346–0549
INTERACTIVE GRAPHIC SYSTEMS, INC.
P.O. Box 1305
Woodland Hills, CA 91365

IRGL: Interactive Graphics Package

Operating System: VMS
Keywords: • Education • Presentation aids

Distribution medium: magnetic tape.

IRGL is an interactive graphics package based on the subroutines that are part of DIGITAL's VAX–11 RGL package. IRGL is primarily a learning aid; however, functions have been added that make IRGL useful in the preparation of graphics for presentations. The package has been used successfully with DECUS number VAX–42. DECUS number VAX–47.

Price: $5 – $225
Contact: DECUS (see Introduction)

ISSCO–GKS

Operating System: MicroVMS, ULTRIX–32, VMS
Keywords: • Engineering • Scientific

This level 2-b implementation of the ANSI Graphics Kernel System Standard supports more than 225 graphics devices. ISSCO–GKS serves data representation graphics applications and is supported by ISSCO's total support services.

Price: $10,800 – $20,000
Contact: Rick Kreysar
(619) 452–0170
ISSCO
10505 Sorrento Valley Road
San Diego, CA 92121

KIC2: Integrated Circuit Layout Program

Operating System: VMS
Keywords: • CAD/CAM • Engineering

This process-independent IC layout editor provides a low-cost alternative to present commercial editors. The program is written in the C programming language and is designed around a simple data model in order to perform efficiently on a general-purpose 32-bit computer. KIC2 drives the AED graphics terminals and the TEK 4113 graphics terminals. DECUS number VAX–44.

Price: $5 – $225
Contact: DECUS (see Introduction)

Layout

Operating System: VMS
Keywords: • Presentation aids • Query facilities

Distribution medium: 1600 bpi magnetic tape.

This general 2-D and 3-D drawing package can be used to produce a variety of images. Layout is simple enough for novice computer users but has enough power and flexibility to satisfy experienced users as well.

Layout produces images by first reading a file containing commands and parameters, then performing those commands. The pen-movement commands allow the produced shape to be modified through control points. Drawing parameters, such as color, line width, and hatch-line spacing, are easily controlled.

Layout can also create and manipulate "elements" — groups of commands that are treated as a unit. Once an element has been defined, it can be used over and over again. The size, shape, and rotation of the element can be changed each time it is used.

The flow of command execution is controlled through LOOPs and IF THEN ELSE blocks. Full expression evaluation, including standard math functions, is available with the SET command. I/O to and from a running program is provided with the PRINT and INQUIRE statements. Three-dimensional capabilities include rotation about the X and Y axes and hidden-surface removal.

A user's manual, an extensive workbook, class outlines and assignments, and sample programs are included.

Price: $500 – $2500

Contact: Tim Bomgardner
(812) 339–5854
RANDOM ACCESS, INC.
Box 2094
Bloomington, IN 47402

LN01 Font Utility

Operating System: VMS

Keywords: • Device drivers/handlers • Printing • Text management

Distribution media: TU58 DECtape II cartridge, 9-track 1600 bpi magnetic tape, RX01.

This utility program helps in the management, development, and use of fonts for the LN01 laser printer. The program provides a mechanism for creating and editing LN01 fonts, combining text with LN01 fonts, obtaining information about an LN01 font, and obtaining sample output.

Refer to SPD #26.35.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $720 – $1200

Contact: Consult your local DIGITAL sales office (see Introduction).

LOOK Interactive Graphics Program and Library

Operating System: MicroVMS, VMS

Keywords: • Engineering • Presentation aids • Research • Scientific

LOOK prepares plots and graphs from simple input data that may come from files on the system or from a user at a computer terminal. LOOK uses a library of 45 VAX–11 FORTRAN–77 device-independent graphics routines. That library is included as a part of the package and may be used independently of LOOK, directly from users' application programs, to produce virtually any kind of graph. The library includes routines for plotted text, both linear and log axis routines, curve generation, plot symbols, circle and arc generation, self-scaling, arrow labeling, and polygon shading. Several device drivers are included, allowing output to the LA120 with retrofit graphics, LA100, LA50, and VT100 with Tektronix emulation retrofit graphics. Custom device drivers can be written on request.

Price: $650 – $1300
Contact: George M. Hauser
(312) 323–8750
FAUSKE & ASSOCIATES, INC.
16W070 West 83rd Street
Burr Ridge, IL 60521

MANMAN/GRAFMAN™

Operating System: VMS
Keywords: • Accounting • General ledger • Manufacturing • Presentation aids

This interactive menu-driven product presents information from the MANMAN data bases in a variety of preformatted color charts and graphs. Custom graphs are also available. The charts and graphs complement standard MANMAN reports in the manufacturing, order management, and accounts receivable, accounts payable, and general ledger products. The system also produces high-quality presentation slides and transparencies. MANMAN/GRAFMAN requires a graphics terminal, 8-color printer or plotter, and decision-support graphics software.

Price: $2000
Contact: Carol Singh, Corporate Communications Coordinator
(415) 969–4442 ext. 4152
ASK COMPUTER SYSTEMS INC.
730 Distel Drive
Los Altos, CA 94022

MAPS/GRAPH

Operating System: VMS
Keywords: • Decision support

MAPS/GRAPH, designed to provide maximum power and flexibility, is used to produce graphs of values in line plots, vertical bar plots, combinations of both, and tables. MAPS/GRAPH operates in a simple question-and-answer mode, allowing the user to easily define and produce graphs on either the 8-pen or 4-pen flatbed plotter or the 6-pen or 2-pen

graphics plotter. Two graphs and their tables or up to four graphs can be plotted on the same page. Most sizing and scaling are handled automatically.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $5000

Contact: Kevin Walsh
(415) 856–1100
ROSS SYSTEMS, INC.
1860 Embarcadero Road
Palo Alto, CA 94303

MAPSS = MAGIC (Management and Analysis of Geographic Characteristics Information)

Operating System: VMS

Keywords: • Earth resources • Engineering • Mapping • Scientific

MAPSS = MAGIC organizes information by orthogonal patterns. The rectangular-block pattern of many city streets is a well-known example of orthogonal relations, as are many common games that use a grid-cell arrangement — chess, checkers, and crossword puzzles, for example. Each of those grids is clearly a data management system that organizes and presents information related to a particular series of attributes. Therefore, each data array is an orthogonal map or plan showing relationships of selected points at a specific time. As information changes through time or as new or different data is obtained, the patterns change but only in relation to the original orthogonal base.

Attribute-coincidence mapping (ACM) is a powerful tool that geologists use to compare map data from diverse sources with a series of transparent overlays. Computer-assisted ACM, particularly with MAPSS = MAGIC, enables the same geologists to consider, evaluate, and replot or store for later retrieval many more kinds of data with less effort, and line printer copy of ACM is readily available for preliminary editing, if desired.

Exploration for mineral, energy, and water resources requires the acquisition, compilation, and evaluation of information from the earth-science disciplines geology, geochemistry, and geophysics. MAPSS = MAGIC can handle geologic map patterns, specific resource information, airborne geophysical data, gravity data, drill-hole records, remote-sensing information, and geochemical analyses.

MAPSS = MAGIC is effective in land-use planning, including the identification of problem areas in land-use conflict. MAPSS = MAGIC software programs are also applicable for environmental pollution studies, including the calculation and display of atmospheric-plume dispersion patterns and ground water percolation models. MAPSS = MAGIC can recalculate, update, and redisplay those models in minutes.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $25,000

Contact: Howard A. Price, Jr., President
(615) 691–2393
THE MAPSS CORP.
20 Argonne Plaza, Suite 123
Oak Ridge, TN 37830

Metafile System

Operating System: VMS

Keywords: • Device drivers/handlers • Pre- and postprocessors • Presentation aids

Distribution medium: magnetic tape.

This stand-alone interactive program, written in FORTRAN, gives users complete flexibility in where, when, and how to display and generate high-quality graphs and graphic images using other Precision Visuals products. The system consists of the Metafile Translator and the Metafile Driver. The Metafile Translator — in effect, a picture editor — is an interactive program that postprocesses DI–3000 metafiles with graphics output to a selected graphics device. Pictures can be read from up to five metafiles concurrently and can be positioned, scaled, and superimposed on a selected graphics device driver, initialized, and selected by a DI–3000 application program. Instead of sending graphics images to a physical graphics device, the Metafile Driver builds a sequential picture library, or metafile, of all graphics information that would normally be routed to a physical graphics device. The pictures on a metafile are mutually exclusive.

Price: $2000 – $9500

Contact: Rob Look
(303) 530–9000
PRECISION VISUALS, INC.
6260 Lookout Road
Boulder, CO 80302

MGSP (Multiware Graphics Subroutine Package)

Operating System: MicroVMS, VMS

Keywords: • Mapping • Presentation aids • Programming tools

Distribution media: 1600 bpi magnetic tape, RX01, RX50.

MGSP is a library of FORTRAN-callable subroutines that implement a powerful 2-dimensional, device-independent graphics applications environment. MGSP is useful for creating high-quality charts and graphs in scientific, industrial, medical, educational, and business environments. More than 140 functional graphics building blocks are supplied, covering low-level device-driving capabilities, advanced primitive support, and complete chart preparation.

MGSP closely resembles SIGGRAPH's CORE specification for a 2-dimensional computer graphics package. Included are subroutines for drawing filled polygons, thick polylines, and software-generated text. Legends, protected areas, and protected polymarkers are also implemented. User-settable attributes control the appearance of those primitives. High-level subroutines draw complete labeled manual or autoscaled line/symbol charts, bar graphs, and pie charts.

A user-configurable device driver library is provided with support for many popular high-resolution graphics display terminals and pen plotters. Binary metafile output is also supported.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $3000

Contact: Robert Hamilton
(916) 756–3291
MULTIWARE, INC.
139 G Street, Suite 161
Davis, CA 95616

MicroVMS/VSI

Operating System: MicroVMS

Keywords:
- Device drivers/handlers
- Microprocessor development

Distribution medium: RX50.

This layered product for MicroVMS provides graphics support for the VAXstation I workstation. MicroVMS/VSI provides windowing support, VT100 and TEK4014 emulation, and a simple mouse-based human interface for window manipulation.

Through the mouse, multiple windows may be created, moved, and overlapped. Windows may be popped to the top of the screen or pushed to the bottom of the screen stacking order. Windows may also be created and manipulated under program control. Multiple VT100 or TEK4014 windows may be present on the screen concurrently. The keyboard may be switched to another window, new VT100 windows may be created, or the screen may be printed to an LA100 or LA50 hard-copy device. The workstation setup allows the workstation characteristics to be configured to customer requirements. On-line help is available on the human interface.

Refer to SPD #28.06.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request

Contact: Consult your local DIGITAL sales office (see Introduction).

MSC/GRASP

Operating System: VMS
Keywords: • CAD/CAM • Mathematics • Scientific • Structural engineering

MSC/GRASP is an interactive graphics program to preprocess geometrical models for finite element analysis (FEA) and postprocess FEA results. MSC/GRASP is used exclusively with the general-purpose finite element analysis program MSC/NASTRAN and gives the FEA engineer extensive graphical display capabilities for model development and output analysis. Those abilities include model displays from any viewpoint, removal of hidden lines and surfaces, displays of deformed and undeformed structure, stress contours on plane and solid elements, extensive color, exploded views of models, a shrink element, full windowing and clipping, and complete element numbering. Special features in the postprocessing of MSC/NASTRAN results include selective scanning of results, reformatting of output, and a complete ability to generate X–Y plots. A complete help facility includes model and solution assistance.

Price: $360/mo
Contact: Perry L. Grant
(213) 258–9111
MACNEAL–SCHWENDLER CORP.
815 Colorado Boulevard
Los Angeles, CA 90041

OPTIPLOT

Operating System: VMS
Keywords: • Aeronautics/aerospace • Automotive • CAD/CAM • Mapping

Distribution media: 9-track 800/1600 bpi magnetic tape; others on request.

OPTIPLOT is a set of FORTRAN subroutines (PLOT, FACTOR, WHERE, and others) generating the Kongsberg plot format. OPTIPLOT also compresses plot files by filtering high-density vectors to user-definable tolerances. Random pen movements are sorted, giving substantial reduction of total plot time. Parameters influencing compressing and sorting (pen up optimizing) are customer-definable with no recompilation, letting the user compromise degree of optimizing with processing power.

MAPIN, a main program delivered with OPTIPLOT, enables OPTIPLOT to be run with the Kongsberg plot format as input.

A version of this product is available for the PDP–11 computer.

Price: NKR 27.000
Contact: Hans Engfelt
47–3–73 82 65
A/S KONGSBERG VAPENFABRIKK
Data Systems Division
P.O. Box 25
N–3601 Kongsberg
Norway

PC4010

Operating System: ULTRIX–32, VMS
Keywords: • Telecommunications

This software package turns a PC into a Tektronix 4010 graphics terminal, allowing users to run graphics applications based on another computer system. Displayed graphics images may be printed using an Epson graphtrak or other dot matrix printer. Configurable for IBM, Hercules, and other graphics boards, 720 × 348 or higher resolution is recommended. PC4010 includes VT102 emulation.

A version of this product is available for the PDP–11 computer.

Price: $179 – $749
Contact: Robert Larsen
(612) 944–0593
GENERAL MICRO SYSTEMS
6440 Flying Cloud Drive, Suite 205
Eden Prairie, MN 55344

Pie

Operating System: MicroVMS, VMS
Keywords: • Mapping • Presentation aids

Memory required: 64K minimum.

This program, written in MACRO, creates pie charts with the colors, labels, and sizes according to user responses to prompts for chart name, section names, colors desired, and percentages. Graphs appear on the CRT or can be drawn on the plotter. Pie applies to any business or planning function requiring compression of data into a simple-to-understand graphics format. The program is easy to understand, with superior presentation of data and different sizes, colors, and line types for many plots of a graph.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

PIPESYS — Double-Line Piping Drawing System

Operating System: VMS
Keywords: • Architecture • CAD/CAM

This set of interactive programs aids in creating double-line piping drawings. Developed on Intergraph CAD systems, PIPESYS routines enable a user to place pipe and fittings easily and accurately. The flexible programs are a supplement to the standard Intergraph capabilities. The minimizing of key-ins, the use of defaults, and the use of a pictorial menu make PIPESYS easy to learn and use.

PIPESYS allows placement by centerline or left/right edge (justification), easy changes in default values, and multiuse of the system. The user can perform any graphics command between pipe placements, and pipe symbology can also be used for duct and cable trays applications. A pipe can be shortened/lengthened with one command or can be placed over an existing line to allow the tracing of a previously defined path. The user can delete the last placement and try again. PIPESYS remembers current pipe diameter, justification, and direction and automatically draws pipe between fittings.

A version of this product is available for the PDP–11 computer.

Price: $2500
Contact: Debra P. Bressler
(713) 266–0000
EGT, INC.
11011 Richmond, Suite 700
Houston, TX 77042

PLOT–Q

Operating System: VMS
Keywords: • CAD/CAM • Device drivers/handlers
• Engineering • Mapping

This queue management system brings efficiency to plotter users in a multiuser environment by minimizing the wait for plotter access and by maximizing the effective operating time of plotters. PLOT–Q's user interface resembles the VMS PRINT command. PLOT–Q offers 12 qualifiers, with such options as form type and number of copies. The user can request when to plot a job, request notification of job completion, and cancel a job. The command SHOW QUEUE PLOTTER allows users to check the progress of jobs in the queue.

PLOT–Q's system operator interface offers 20 qualifiers. The system operator can specify that jobs be plotted in order of increasing size, reserve plotters for certain jobs, and start and stop the dequeuing jobs at any time. The system operator can also pause jobs temporarily and resume the job or start from the top of the file.

PLOT–Q is user installable. The product is fully supported and is shipped with VMS-style help files. An asynchronous communications port is required.

Price: $1400 – $6200
Contact: Roy Fischer
(617) 277–1440
MERIDIAN SOFTWARE, INC.
685 Chestnut Hill Avenue
Brookline, MA 02146

PLOTLN™

Operating System: VMS
Keywords: • Mapping • Printing • Software utilities

PLOTLN includes a library of FORTRAN subroutines that can be called from any language that supports the VMS calling conventions. The routines, which produce graphics on the LN01 from a user-written program, have the same format and function as the subroutines commonly used with CalComp plotters. Software designed to output to CalComp plotters can output to the LN01 by using the /PENPLOT option of the PLOTLN Command Verb. PLOTLN does the following:

- Converts generic graphic display descriptions to the mosaics needed to produce graphic images on the LN01.
- Supports the conversion of ReGIS picture files into data files that produce equivalent pictures on the LN01.
- Allows any VMS programming language to produce graphics on the LN01 by calling the underlying PLOTLN subroutines. PLOTLN's call interface is directly compatible with the CalComp interface used for CAD/CAM applications.
- Supports the integration of text and graphics on a single page when used with a text editor that allows literal data to be included from a file.
- Allows a viewport size and location to be defined for each output display file. The graphic display automatically expands or reduces to fill up the defined viewport, allowing easy integration of the display into a page with text or other graphic images.
- Supports a metafile facility that allows a selected portion of an original picture to be independently sized and displayed.
- Allows any software that produces Base ReGIS or CalComp output to use the LN01 Page Printer as a graphics hard-copy device.
- Includes specially designed text fonts in four orientations and four type sizes, allowing text in different orientations to appear on the same page.

PLOTLN™ is a trademark of Image Research, Inc.

DIGITAL distributes this software product under licenses from Image Research Corporation and Compugraphics Corporation.

Refer to SPD #A3.32.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $3500
Contact: Consult your local DIGITAL sales office (see Introduction).

PLOTSTANDARD–X

Operating System: MicroVMS, VMS
Keywords: • CAD/CAM • Engineering
• Mechanical engineering • Scientific

Distribution medium: 9-track magnetic tape.

This industry-standard plotting library is for terminals supporting the ReGIS graphics instruction set, pimarily the VT240, VT241, and VT125. Those terminals have the same plotting support as most commercial pen plotters and include 3-color plotting on the VT241. With POSTSTANDARD–X, graphics can be integrated into application programs, which extends the terminal's capabilities into a more cost-effective workstation.

The plotting interface includes 10 subroutines: PLOTS, for plot initialization routine; PLOT, for line (vector) drawing; FACTOR, for enlarging or reducing plots; SYMBOL, for generating symbols, numbers, and annotations; NUMBER, for plotting a floating-point number; SCALE, for scaling user data for graphical display; AXIS, for generating a fully annotated and titled axis; LINE, for plotting a multipoint line, with optional annotation; WHERE, for obtaining drawing coordinates; and NEWPEN, for selecting the shade of gray or color for subsequent plot activity.

POSTSTANDARD–X is compatible with existing applications that use 16- or 32-bit integer arithmetic. PLOTSTANDARD–X does not require workspaces or common areas, although they are tolerated. Documented sources are included.

Price: $1200
Contact: Michael D. Sestric, Jr.
(816) 363–0171
CAD/CAM CONSULTANTS, INC.
806 W. 87th Street
Kansas City, MO 64114

PLXY–11/VAX (Plot Package)

Operating System: VMS
Keywords: • Device drivers/handlers • Mapping
• Pre- and postprocessors • Printing

Distribution media: RX01, TU58 DECtape II cartridge.

PLXY–11/VAX provides the VAX/VMS user with access to the plotting capabilities of the LXY graphics printer. The package consists of a library of FORTRAN-callable graphics subroutines and a postprocessing program to create a plot file.

The PLXY–11/VAX user writes FORTRAN application programs, using the graphics facilities provided by the PLXY–11/VAX subroutine library. Those subroutines convert the user's graphics requests into vectors stored on an intermediate (vector) file. Vector data from

that file is sorted and formatted into LXY graphics printer plottable data (raster format) by the postprocessing program. That plottable data is stored in an intermediate file, where it can be subsequently transferred by a system utility to the LXY graphics printer. Output to the LXY graphics printer is directed through the standard LP11 line printer driver or terminal driver for serial line options.

The PLXY–11 subroutine library includes routines for character and line drawing. As all operations are program controlled, either axis or both axes can be addressed in positive or negative incremental steps.

Refer to SPD #25.42.xx when requesting further information on this product from your local DIGITAL sales office.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

POLYGRAFIX

Operating System: VMS
Keywords: • Presentation aids • Statistics • Text management
Distribution media: RX01, TU58 DECtape II cartridge.

The five host-resident graphics packages that make up the POLYGRAFIX software package are written in FORTRAN and support a wide range of graphics applications on a GIGI (VK100) or a VT125 terminal.

- The ReGIS (Remote Graphics Instruction Set) Graphics Editor allows the user to create and edit pictures interactively on a GIGI or a VT125 terminal. The keypad-driven ReGIS Graphics Editor can generate ReGIS code for the terminal. The user can define or change attributes, such as color, shading, writing patterns, text size, and direction. Pictures created by the Graphics Editor can be stored in files on the host system for the ReGIS Slide Projection System and ReGIS DEC–RITE.
- The ReGIS Slide Projection System allows the user to display existing ReGIS picture files. This system provides a method of using picture files in a manner that resembles a slide projector.
- The ReGIS Character Set Editor allows users to construct alternate character sets of up to 95 characters each. The character sets are stored in files on the host system and may be down-line loaded into the GIGI or VT125, VT240, or VT241's three alternate character sets. The package allows nontechnical users to create, load, and use character sets.
- ReGIS DEC–RITE (ReGIS Illustrated Text Editor) is an on-screen editor providing interactive text-attribute selection and optional final copy from a GIGI or a VT125 connected to an LA34–VA or an LA100 printer.

- The ReGIS Data Plotting Package performs interactive file and data manipulation for graphics plotting. The package allows the user to enter and edit data in a table and to draw predefined plots, such as bar graphs or line graphs, or to perform predefined statistical analysis.

Refer to SPD #26.14.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $1440 – $2400
Contact: Consult your local DIGITAL sales office (see Introduction).

QUEST Graphical and Text Information System

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Architecture • Information management • Presentation aids • Text management

QUEST is a generalized subset of the larger BADGER system, developed for the Scottish Education Department and the Department of Education and Science and used for the COSLA/SED National School-building Survey. QUEST allows the recording and viewing of information held as plain language text linked to drawings. Access to records is obtained by hierarchically ordered text headings or by pointing at drawings. Typically, drawings may be building plans or diagrams depicting an organizational structure. QUEST includes procedures for tracing (digitizing) from existing drawings to a computer and for capturing text data through user-designed forms (templates) on a display screen.

The system, written in C, requires any computer that runs full UNIX* Version 7, System III, BSD 4.1, or commercially available versions such as XENIX or UNITY. Smallest configurations include DIGITAL's LSI–11/23 microprocessor with 22-bit addressing, with at least 256KB memory and 10MB hard disk, plus back-up media. Available hardware includes more powerful Motorola 68000–based microcomputers, such as the Plessey System 68, at similar cost.

Peripherals include a raster graphics terminal, such as the Westward GT1015 or GT2015; a graphics plotter, such as the Hewlett-Packard 7221 (A3) or 7580/5 (A1/0); a digitizer, such as the TD HR–48 or Summagraphics ID–36; and a dot matrix or daisywheel printer. Equipment can be obtained independently of software; consulting services are offered on the selection, purchase, and commissioning of equipment.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: £10,000
Contact: Aart Bijl
44–(031) 667 1011 ext. 4598
EDCAAD, DEPARTMENT OF ARCHITECTURE
University of Edinburgh
20 Chambers Street
Edinburgh EH1 1JZ
United Kingdom

ReGIS CAI Primer

Operating System: VMS
Keywords: • Computer-aided instruction

Distribution media: 9-track 800/1600 bpi magnetic tape, RK07, RL02, RX01, TU58 DECtape II cartridge.

This computer-assisted instruction course on the use of ReGIS, the Remote Graphics Instruction Set firmware, is resident in the GIGI graphics terminal (see SPD #30.10.00). All instruction is presented on line through a GIGI terminal connected to a RSTS/E, a VAX/VMS, or a TOPS–10 operating system host. The course is composed of seven instructional modules that explain the GIGI's firmware graphics language, the Remote Graphics Instruction Set (ReGIS). Those modules cover the specification of screen and writing attributes as well as basic graphics entities, such as points, circles, vectors (lines), text, and curves. The course takes between six and eight hours to complete.

Refer to SPD #30.12.xx when requesting further information on this product from your local DIGITAL sales office.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Consult your local DIGITAL sales office (see Introduction).

ReGIS (Remote Graphics Instruction Set) Software

Operating System: VMS
Keywords: • Presentation aids • Statistics • Text management

Distribution media: RX01, TU58 DECtape II cartridge.

The ReGIS host-resident graphics packages, written in FORTRAN, support a range of graphics applications on a GIGI (VK100), VT125, VT240, or VT241 terminal.

- The ReGIS Graphics Editor allows users to create and edit pictures interactively. The keypad-driven ReGIS Graphics Editor generates ReGIS code for the terminal. The user can define or change attributes, such as color, shading, writing patterns, text size, and direction. Pictures created by the Graphics Editor can be stored in files on the host system for use by the ReGIS Slide Projection System.

- The ReGIS Slide Projection System allows users to display ReGIS picture files. This system provides a method of using picture files in a manner that resembles a slide projector.
- The ReGIS Character Set Editor allows users to construct alternate character sets of up to 95 characters each. The character sets are stored in files on the host system and may be down-line loaded into the GIGI or the VT125, VT240, or VT241's three alternate character sets. The package allows nontechnical users to create, load, and use character sets.

Refer to SPD #26.15.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $80 – $600
Contact: Consult your local DIGITAL sales office (see Introduction).

REPLICORE

Operating System: Independent
Keywords: • CAD/CAM • Engineering • Simulation

This interactive 3-D graphics modeler enables both programmers and nonprogrammers to quickly build and manipulate complex objects and scenes. An easy-to-use menu system allows interactive design through light pen or tablet. The REPLICORE Command Language (RCL) enables users to design and edit through keyboard commands and/or REPLICORE-readable design files. Objects such as F–16 jet fighters (and their corresponding data bases) can be modeled quickly, due to REPLICORE's versatile design primitives, automatic backup function, and single-keystroke command options.

REPLICORE's graphics features include hidden-line and surface removal, antialiasing, realistic shading, light source and other surface property assignments, scaling, zoom, wireframe rotation, and instant view changing (front, top, side, isometric, or all four simultaneously). An archiving system handles design storage and retrieval.

Animation is achieved by specifying trajectory, scale factor, and rotation of objects and scenes. A paint program offers variable brush sizes, mixable colors, and labeling capabilities, and 3-D models are manipulated in those painted settings. Sales, art, and marketing can easily access engineering models and incorporate them into presentation and sales materials.

A version of this product is available for the PDP–11 computer.

Price: $2900 – $9500
Contact: Dr. Larry Feldman
(415) 657–3705
CREATIVE VISUAL SOFTWARE
1172 Ocaso Camino
Fremont, CA 94538

RGL (ReGIS Graphics Library)

Operating System: VMS
Keywords: • Architecture • Engineering • Mechanical engineering • Presentation aids

Distribution media: RX01, TU58 DECtape II cartridge.

This collection of subroutines conforms to the standard VAX/VMS calling interface and is designed to support the graphics capabilities of the VT125 terminal. RGL is written in FORTRAN, executes under the VAX/VMS operating system, and features picture-drawing and data-plotting capabilities.

Refer to SPD #25.62.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $3500
Contact: Consult your local DIGITAL sales office (see Introduction).

Rhintek Plot Package

Operating System: VMS
Keywords: • CAD/CAM • Printing

Distribution media: 9-track 800 bpi magnetic tape; other media available at extra cost.

Rhintek Inc. has developed a complete software plotting package for Printronix printer/plotters attached to DIGITAL's systems. These routines are supplied in source form and can be adapted by the customer to drive any printer capable of plotting. This package, written in FORTRAN, is capable of directly replacing the standard CalComp-type software subroutines in existing plotting programs. The routines can produce an equivalent plot on a printer/plotter, without any program changes. The package forms an overlay capability and has been used in the field for several years. The package intersperses printing and plotting.

Two packaged plot routines are provided for a user who needs a quick plot capability. The resulting plots are appropriately scaled, and the axes are automatically annotated to produce a useful result. The two routines are PPLXY, for a linear 1-page plot with two variables, and PPLDB, for a logarithmically scaled 1-page plot.

A version of this product is available for the PDP–11 computer.

Price: $1050 – $1200
Contact: Heeth Clark
(301) 730–2575
RHINTEK INC.
P.O. Box 220
Columbia, MD 21045

RIMS/GRAF

Operating System: VMS
Keywords: • Programming tools

This multifile graphics program–generating system can be used by both nonprogrammers and programmers to quickly and easily create ready-to-use business-oriented graphics programs and the source code for those programs in a variety of DIGITAL-based operating systems and language compilers. RIMS/GRAF can readily be superimposed over any existing data file structure. RIMS/GRAF enables users to generate bar graphs, deviation bar graphs, pie graphs, and a U.S. map graph. Ready-to-use graphics programs are generated in accordance with answers, called parameters, that are provided by the RIMS/GRAF user in response to questions posed on a screen.

A version of this product is available for the PDP–11 computer.

Price: $1250 – $2500
Contact: Sales Department
(412) 262–5507
INFORMATION AND SYSTEMS RESEARCH, INC.
410 Rouser Road, Airport Office Park, Building #1
Coraopolis, PA 15108

SAS/GRAPH® Software

Operating System: VMS
Keywords: • Mapping • Presentation aids

SAS/GRAPH software provides device-intelligent color graphics and can be used to produce charts, plots, and maps, using a variety of colors and patterns. Many font styles can be used for titles, footnotes, and notes; fonts can also be created. Fifteen procedures are available for plotting; displaying bar, pie, exploded pie, star, and block charts; projecting statistical data to choropleth, surface, prism, and block maps; making slides; and replaying stored results for management presentations. Map coordinates for U.S. states and counties and for Canadian provinces are provided. SAS/GRAPH software is used in business and research for presentation and information graphics applications. Major graphics devices are supported; write or call Software Sales at SAS Institute for a complete list.

Price: Available upon request
Contact: J. Gail Spain
(919) 467–8000
SAS INSTITUTE INC.
Box 8000, SAS Circle
Cary, NC 27511–8000

SATURN–GRAPH™

Operating System: VMS
Keywords: • Mapping • Presentation aids

This graphics package requires no graphics or programming experience. SATURN–GRAPH provides three modes of graphic abilities. In each mode, the system features color displays and various patterns and densities. Graphics terminals are not required.

The first mode, Calc-Graphics, combines SATURN–GRAPH with SATURN–CALC, the electronic spreadsheet. Data in the spreadsheet may be transferred to pie charts, line graphs, bar charts, and U.S. demographic maps.

The second mode, Interactive Graphics, is also known as menu-driven graphics. A fill-in-the-blank format and user-controlled features provide detailed line graphs, Gantt charts, word boards, and more.

The third mode, User-defined Graphics, has a graphics command language that allows graphs to be custom designed. The commands are easy to learn and provide total control.

A version of this product is available for the PDP–11 computer.

Price: $489 – $978
Contact: Becky H. Tighe, Public Relations
(612) 944–2452 or (800) 328–6145
SATURN SYSTEMS, INC.
6875 Washington Avenue S., Suite 218
Minneapolis, MN 55435

SEISMIC 3000

Operating System: VMS
Keywords: • Geoscience • Petroleum

Distribution medium: magnetic tape.

SEISMIC 3000 allows the display and interactive manipulation of 2- and 3-dimensional seismic data. Software functions include display in variable density and variable area formats; 3-dimensional data volume access with viewing from any X-, Y-, Z-axis normal; an interactive movie-loop display of parallel seismic sections; a presentation of intersecting seismic sections; a multiple-format real-time display of trace data; an interactive 2- and 3-dimensional drawing of subsurface structure interpretations; 3-dimensional displays of seismic section data, subsurfaces, and interpretations; and an interactive display of seismic section data.

Price: $4500 – $9000
Contact: Phyllis Flynn
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

Series 5000 Advanced Graphics Software

Operating System: VMS
Keywords: • Architecture • CAD/CAM • Electronic • Engineering

This software provides 32-bit computer power to speed complex design and drafting functions. The software operates on Auto-trol's Advanced Graphics Workstation (AGW) or on Auto-trol's Advanced Raster Workstation (ARW) with the VAX family of 32-bit processors.

Engineers, architects, designers, and drafters can use the Series 5000 software to increase productivity, reduce overhead costs, improve drawing quality, and reduce design errors. The Series 5000 data base provides 3-D geometry, random access with an in-place updating capability, user-definable units, and single- or double-precision data representation.

Auto-trol offers the following software programs: PLAN (Architectural Drafting and Documentation System), ILLUSTRATOR (Architectural Rendering Design System), Plant Facilities Design Package (PFDP), Rapid Draft Electrical Schematic (RAP–EL), Rapid Draft Process and Instrumentation Diagrams (RAP–PID), Rapid Draft Isometric Piping (RAP–ISO), Operating Plant Drafting System (OPDS), Exploration Base Mapping System (EBMS), Base Map Generation and Locational Conversion System (BASIS), AT/COGO (Auto-trol Coordinate Geometry), Automated Technical Illustration Production System (ATIPS), and Ortho-to-Axonometric Package (OTAP).

Price: Available upon request
Contact: Kate Cronin
(303) 452–4919
AUTO–TROL TECHNOLOGY
12500 North Washington Street
Denver, CO 80233

Series 7000 Advanced Graphics Software

Operating System: VMS
Keywords: • CAD/CAM • Engineering • Manufacturing • Mechanical engineering

This geometric modeling system for the mechanical design and manufacturing industry provides a set of tools for the graphic development of 2- or 3-dimensional product models that can be used to conduct design studies, generate documentation, and prepare numerical control (N/C) programs. Series 7000 software operates on Auto-trol's Advanced Graphics Workstation (AGW) system or on the Advanced Raster Workstation with the VAX family of 32-bit processors.

Auto-trol offers the following software programs: Numerical Control, COMPACT II Source Generator, APT Source Generator, Flat Pattern Development Package, Finite Element Interface (FEI), Electrical Control Design System (ECDS), and Nesting.

Price: Available upon request
Contact: Kate Cronin
(303) 452–4919
AUTO–TROL TECHNOLOGY
12500 North Washington Street
Denver, CO 80233

SHADE

Operating System: VMS
Keywords: • CAD/CAM • Engineering • Mapping • Presentation aids

SHADE provides for the generation of realistic shaded color pictures from computer-defined arbitrary shapes. Objects that are defined for computer representation can be displayed as smooth color-shaded surfaces, including varying degrees of transparency. SHADE-generated displays can also be used for the presentation of computational results. By performing a color mapping, SHADE can color the model surface to display such analysis results as pressures, stresses, and temperatures. NASA has used SHADE extensively with programs for the design and analysis of high-performance aircraft. Industry should find applications for SHADE in such areas as computer-aided design (CAD) and computer-aided manufacturing (CAM).

Objects can be defined to SHADE in terms of polygons, PANAIR networks, or parametric bicubic splined patches. The image data used to generate the picture is comprised of polygons. The parametric bicubic patch definition is subdivided to yield a polygonal definition for shaded display purposes. Defining polygons can have a different color associated with each corner point. SHADE offers numerous options, including varying the resolution from 256 to 4096 pixels, displaying text with the graphics, creating and editing a user view file, controlling the shading techniques (transparency, highlights, and specular reflectivity), and generating color bars from displayed results correlation.

Price: $1125
Contact: Customer Support Department
(404) 542–3265
NASA'S COMPUTER SOFTWARE MGT. AND INFO. CENTER
University of Georgia, 112 Barrow Hall
Athens, GA 30602

SIMPLEPLOT Mark 2

Operating System: UNIX* (Berkeley), VMS
Keywords: • Device drivers/handlers • Scientific • Simulation
Distribution media: magnetic tape, RX01, RX02.

SIMPLEPLOT Mark 2 is a device-independent library of FORTRAN subroutines for plotting graphs. Those subroutines make graph drawing easy for the nonexpert programmer. Facilities include linear/logarithmic/normal probability/polar scales and axes, multiple scales on single graphs, choice of smooth curves through sets of data, linear and quadratic regression, distinct broken lines and symbols, keys and titles, layout in pages and groups, grids, and histograms.

Drivers can be obtained for pen plotters, raster scan devices, refresh displays, and character devices.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: £1050

Contact: David Butland
44–(0274) 309214
BRADFORD UNIVERSITY SOFTWARE SERVICES LTD.
16 Campus Road, Off Shearbridge Road
Bradford, West Yorkshire BD7 1HR
United Kingdom

SIMPLEPLOT Mark 2 Section 2

Operating System: UNIX* (Berkeley), VMS

Keywords: • Presentation aids • Scientific

Distribution media: magnetic tape, RX01, RX02.

SIMPLEPLOT Mark 2 Section 2, a major extension to the SIMPLEPLOT Mark 2 FORTRAN library, consists of about 60 user subroutines for representing data as contour plots and surface pictures. Data to the subroutines can be:

- Gridded: regular or irregular "tartan" grids
- Function definitions: $z = f(x,y)$
- Arbitrarily spaced (x,y,z) values
- Data structured into elements as from finite element analysis programs

Facilities include triangulating irregularly spaced data, contouring from any of the data forms on Cartesian or Polar charts, surface representations with hidden line removal, annotating surface pictures using (x,y,z) coordinates, and all the layout and labeling facilities of SIMPLEPLOT Mark 2 Section 1.

As an extension of SIMPLEPLOT Mark 2 Section 1, this software can address an unlimited range of graphics devices.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: £1950 – £3000
Contact: David Butland, Managing Director
44–(0274) 309214
BRADFORD UNIVERSITY SOFTWARE SERVICES LTD.
16 Campus Road, Off Shearbridge Road
Bradford, West Yorkshire BD7 1HR
United Kingdom

SIMPLEPLOT Mark 2 Section 4

Operating System: VMS
Keywords: • Presentation aids • Text management

This extension to the SIMPLEPLOT FORTRAN library is used to produce visually arresting graphics output. The software offers enhanced keys and captions, shading, pie charts, and software characters.

A version of this product is available for the PDP–11 computer.

Price: £950 – £1800
Contact: David Butland
(44) 0274 309214
BRADFORD UNIVERSITY SOFTWARE SERVICES LTD.
16 Campus Road
Bradford, West Yorkshire BD7 1HR
United Kingdom

SIR/GRAPH

Operating System: ULTRIX–32, VMS
Keywords: • Data base management • Statistics

This interactive, high-resolution graphics package for SIR/DBMS produces business and scientific graphics, such as bar charts, pie charts, line charts, and text slides on graphics devices and hard-copy plotters. The occasional user can create plots by indicating the source of the data and the type of plot. SIR/GRAPH selects suitable scaling, colors, and layout. The experienced user can control all the chart parameters through interactive menus. Users do not need to memorize complex commands and specifications.

SIR/GRAPH runs on all computers that support SIR/DBMS.

Price: Available upon request
Contact: Director of Sales
(312) 475–2314
SIR, INC.
820 Davis Street, P.O. Box 1404
Evanston, IL 60204

Solid 3000

Operating System: VMS
Keywords: • CAD/CAM

Distribution medium: magnetic tape.

Solid 3000 allows the display of 3-dimensional solid modeling data and interactive 3-dimensional transformations of solid shaded objects. The software includes curved-surface and curved-line display, with bicubic B-spline surface patches. The system interfaces to other modeling programs and handles transparent shaded surfaces, hierarchical display list structure, object and polygon mesh data types, positionable colored light sources with specular reflection, and antialiased hidden-surface shaded images.

Price: $2500 – $5000
Contact: Phyllis Flynn
(617) 667–7070
ADAGE, INC.
One Fortune Drive
Billerica, MA 01821

SPECIF

Operating System: VMS
Keywords: • CAD/CAM • Electronic • Engineering • Structural engineering

SPECIF is a graphical tool that supports the SADT™ and IDEF0 specification methods. User interfacing is achieved through a set of built-in menu-driven formats and simple English dialog. The graphical elements that make up SADT/IDEF0 diagrams are textually described. The dialog minimizes the number of operator keystrokes. Diagrams are then syntactically checked. The layout of the diagrams is automatically driven and printed on a plotter.

SADT™ is a trademark of SOFTECH (USA).

Price: $7000
Contact: Gilles Rigal
(33.1) 281.41.33
INSTITUT DE GENIE LOGICIEL
39, rue de la Chaussée d'Antin
Paris 75009
France

Speech*Maker

Operating System: VMS
Keywords: • Mapping • Presentation aids

Memory required: 256K.

Speech*Maker is an efficient, affordable, and easy-to-use system that helps professionals enhance their presentation skills by preparing well-designed overheads. Speech*Maker draws lines, boxes, and circles. The 94-character ASCII set includes four sizes, three fonts, slant, rotate, underline, four arrows, and a 5-pointed star. You can select from more than 100 predefined layouts. You can use the predesigned organization chart or build your own, prepare flow charts, and highlight your points with arrows and stars. The special plotter-control features enable you to use the full range of colors in your pen set. Output can be generated from a plotter or printer; a graphics terminal is not required.

Price: $499

Contact: Ronnie Jarett
(217) 793–0884
GRAPHIC M*I*S, INC.
960 Clock Tower, Suite G
Springfield, IL 62704

SPEED (Sketch Pad Economy Editing System)

Operating System: VMS

Keywords: • Mapping • Software utilities • Source code control

Memory required: Virtual.

This series of programs provides an inexpensive and easy-to-use method of creating, editing, and plotting graphics images on a VMS system. Required hardware consists of 4014- or 4014-emulating terminals. Optional LXY-series or CalComp-style plotters are necessary for plotting. Required software includes the VMS operating system and a FORTRAN compiler. A library of plot calls, such as PLTUSL, provided with PLXY software or another plot library with similar calls is necesary to provide plotter support.

SPEED is functionally divided into three sections. The first routines are provided for the translation of ReGIS commands into vector files and vector files into ReGIS commands. The second routine is a graphics screen editor for vector images. The last routine converts the vector files for output to the plotter.

This package consists of source code (VAX FORTRAN), command files for installation, a README.DOC file, and four selectable font files. DECUS number VAX–108.

Restrictions: Not all ReGIS commands are implemented.

Price: $5 – $225

Contact: DECUS (see Introduction)

SPSS Graphics™

Operating System: VMS

Keywords: • Decision support • Mapping • Presentation aids • Statistics

This interactive display system runs from a user-friendly interface of menu selection and form fillout and is available as an option to the SPSS–X statistical analysis system. SPSS Graphics offers a wide range of chart types such as bar charts, pie charts, line charts, and statistical charts and maps. In addition, the user may combine charts on a page, with complete control over the placement and size of each chart. Text-only charts can be generated for highlighting and explanation.

For novices and occasional users, SPSS Graphics contains a set of default specifications to create a chart in a few steps: scaling, layout, color, type style, patterns, legend, labels, and more are automatically generated. For more experienced users, SPSS Graphics allows complete control over most graphic elements in a chart: color; type style, weight, and size; fill patterns; layout; scaling; title; legend; footnotes; labels; markers; grid, reference, and root lines; line styles; and more.

Flexible file handling allows the user to draw different types of charts with the same data or the same type of chart with different data sets. SPSS Graphics handles an unlimited number of cases and accepts data from an SPSS–X system file, from a previously saved graphics data file, or from terminal data entry. SPSS Graphics has built-in data aggregation facilities, eliminating the need for externally programmed aggregation.

SPSS Graphics runs on a wide variety of terminals and plotters, allowing hardware upgrade while keeping the software running as before. SPSS Graphics is portable to several computers and operating systems.

Price: Available upon request

Contact: Susan Phelan
(312) 329–2400
SPSS INC.
444 N. Michigan Avenue
Chicago, IL 60611

STAG II Drawing System

Operating System: ULTRIX–32, UNIX* (Berkeley)

Keywords: • Architecture • CAD/CAM • Civil engineering • Engineering

STAG produces useful, accurate, and detailed 2-D line drawings and 3-D perspective images. STAG offers line styles and color, curves, and hatching, with picture windowing and zooming, repetition, nesting, handing, rotation, stretching and scaling, optional variable and rotatable grids, and text fonts. Users control all 2-D and 3-D drawing operations through a display screen.

No computing skills are required, but users have to think logically about how they organize their drawing operations. Input is direct, through a graphics display. All variables affecting the construction of drawings are user controlled. Output is on either the display terminal or paper. Plotted output can be at selected scales.

STAG is written in C to run in a UNIX* software environment. On-site expertise in operating with UNIX* is required.

The system requires any computer that runs full UNIX* V7, SIII BSD 4.1, or commercially available versions such as XENIX or UNITY. Current smallest configurations include DIGITAL's LSI–11/23 microprocessor with 22-bit addressing, with at least 256Kb memory and 10Mb hard disk, plus back-up media. Available hardware includes more powerful Motorola 68000–based microcomputers, such as the Plessey System 68, at similar cost.

Peripherals include a raster graphics terminal, such as the Westward GT1015 or GT2015; a graphics plotter, such as the Hewlett-Packard 7221 (A3) or 7580/5 (A1/0); and a dot matrix or daisywheel printer. Equipment can be obtained independently of software; consultancy services are offered on selection, purchase, and commissioning of equipment.

STAG includes a data base management system that works efficiently on small computers, can be used for other computing applications, and allows adding applications. Included error trapping and recovery functions protect users from accidental loss of files.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: £5000 – £11,000

Contact: Aart Bijl
(031) 667 1011 ext. 4598
EDCAAD, DEPARTMENT OF ARCHITECTURE
University of Edinburgh
20 Chambers Street
Edinburgh EH1 1JZ
United Kingdom

STATSPLINE Programs

Operating System: VMS

Keywords: • Mapping • Printing • Simulation

Distribution medium: magnetic tape.

The STATSPLINE package consists of two programs: Histospline and Dataspline. Histospline smooths a histogram to provide an "estimate" of the underlying probability density curve (a "histospline"). Dataspline similarly transforms a set of individual observations to a "density curve" (a "dataspline"). The program can also handle histograms to produce smoothed histosplines.

Printer-plot routines for histograms and curves are included, as are plotting routines using Tektronix IGL. DECUS number VAX–59.

Price: $5 – $225
Contact: DECUS (see Introduction)

SUPERDRAW

Operating System: VMS
Keywords: • CAD/CAM • Civil engineering • Graphics • Mechanical engineering

The features of this comprehensive computer-aided design and drafting system cut across many disciplines, such as civil and architectural engineering, mechanical engineering, electrical and logic layouts, artwork for documentation, flow charts, slide preparation for sales meetings, and so on. The system is ideal for smaller firms or divisions in which one system has to perform a wide variety of functions.

SUPERDRAW has a full set of graphic data entry and editing commands, similar to systems costing much more. Very strong symbol capability draws on a wide variety of prestored symbols in many disciplines and also enables the user to develop a library of special symbols or functions, which can be selected from the user's own menu. Two- and 3-dimensional capability allows the user complete freedom to develop drawings or designs.

Price: $5000
Contact: Sales Manager
(412) 661–2100
ALGOR INTERACTIVE SYSTEMS, INC.
Essex House, Suite L1, Essex Square
Pittsburgh, PA 15206

Tables

Operating System: MicroVMS, VMS
Keywords: • Presentation aids • Printing

Memory required: virtual system, 1MB. Distribution medium: magnetic tape.

Tables, written in FORTRAN, is the easy, efficient way to shape numbers, text, and symbols into detailed tabular format. As an option to *TELL*–A–GRAF, Tables combines with ISSCO's high-quality charts the precision of tables and the persuasive power of graphics.

When you supply the data, Tables automatically designs the table into one of the standard formats or lets you control the design for any custom look. Data may also be handled in many formats. Tables draws on TELL–A–GRAF data files to convert existing charts into tabular format; or, the Data Connection™ may be incorporated to directly access data files, manipulate data, and display the results in tabular format.

Price: $700 – $3800
Contact: Jeff Anderson
(619) 450–0881
ISSCO
10505 Sorrento Valley Road
San Diego, CA 92121

TELL–A–GRAF

Operating System: MicroVMS, VMS
Keywords: • Presentation aids • Printing

Memory required: virtual system, 1MB. Distribution medium: magnetic tape.

This software, written in FORTRAN, enables nonprogrammers to generate sophisticated bar, line, pie, and word charts. The simple, conversational English commands provide the power and convenience of sophisticated computer graphics without requiring computer expertise.

The unlimited ability to customize charts lets you put multiple plots on a page; intermix lines, pies, bars, and text; annotate; map; and meet any other design request. ISSCO's artist-quality graphics let you convey all your information exactly the way you want with color, sharpness, and clarity.

Price: $9500 – $21,500
Contact: Jeff Anderson
(619) 450–0881
ISSCO
10505 Sorrento Valley Road
San Diego, CA 92121

TELLAPLAN

Operating System: VMS
Keywords: • Presentation aids • Project management
• Scheduling

Memory required: 1.5MB and 4MB disk storage. Distribution medium: magnetic tape.

TELLAPLAN is a project management, planning, reporting, and schedule-charting application software system that provides presentation-quality graphics of more than 14 Gantt charts and that allows customization of charts to match existing corporate standards. The system contains English-language commands and can be used to prepare plans and monitor schedules, including full reporting of staff requirements by skill type and actual versus budget costing by department. TELLAPLAN can generate more than 70 types of cost/resource charts in a variety of formats. The system allows additions and revisions to a plan while the project is in progress, permits what-if analysis without modification of the original plan, and computes the critical path

between tasks every time the plan is updated. TELLAPLAN produces scheduling charts for each activity a department schedules, an overview for management presentations, or a report for an individual. The system can specify a task's unique characteristics, such as personnel involved by name and special equipment required.

Price: $10,000 – $15,000
Contact: Gayl Wheeler
(619) 452–0170
ISSCO
10505 Sorrento Valley Road
San Diego, CA 92121

TESS™ (The Extended Simulation System)

Operating System: Independent
Keywords: • Data base management • Decision support • Presentation aids • Simulation

This software environment for simulation projects includes graphical model building, data management, presentation graphics, report generation, animation, and statistical analysis. TESS is written in FORTRAN and requires two megabytes of virtual memory.

A version of this product is available for the PDP–11 computer.

Price: $34,000
Contact: Customer Service Department
(800) 428–7636
PRITSKER & ASSOCIATES, INC.
P.O. Box 2413
West Lafayette, IN 47906

TFONT (Text Font Design Program)

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Presentation aids • Printing • Text management

TFONT allows users to design their own text fonts and logos, which can then be used by STAG. Designs are created directly on the display screen, on a 40 × 40 grid, and are stored in font libraries that can be called from other programs.

The system is written in C to run in a UNIX* software environment. On-site expertise in operating with UNIX* is required.

The system requires any computer that runs full UNIX* V7, SIII BSD 4.1, or commercially available versions such as XENIX or UNITY. Current smallest configurations include DIGITAL's LSI–11/23 microprocessor with 22-bit addressing, with at least 256Kb memory and 10Mb hard disk, plus back-up media. Available hardware includes more powerful Motorola 68000–based microcomputers, such as the Plessey System 68, at similar cost.

Peripherals include a raster graphics terminal, such as the Westward GT1015 or GT2015; a graphics plotter, such as the Hewlett-Packard 7221 (A3) or 7580/5 (A1/0); and a dot matrix or daisywheel printer. Equipment can be obtained independently of software; consultancy services are offered on selection, purchase, and commissioning of equipment.

The data base management system supplied works efficiently on small computers, can be used for other computing applications, and allows adding applications functions.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: £1200

Contact: Aart Bijl
(031) 667 1011 ext. 4598
EDCAAD, DEPARTMENT OF ARCHITECTURE
University of Edinburgh
20 Chambers Street
Edinburgh EH1 1JZ
United Kingdom

UNICON (Universal Icon System)

Operating System: ULTRIX–32

Keywords: • CAD/CAM • Development tools • Operating systems • Programming tools

This icon-driven end user interface to UNIX* uses graphics to display pictorial representations (icons) of the functions and data in the user's file. An object-oriented interface, UNICON models the user's task environment by providing a set of tools (the functions) and objects (files and data). The shapes and colors reflect how the user would see them. The user can modify the standard icons, add new ones for new categories of objects, create new tools based on underlying UNIX* functions, and ask to see the UNIX* command equivalent of icon tools.

UNICON uses the Graphical Kernel System (GKS) interfaces and works with any cursor-moving device, such as a keyboard, a mouse, or a joystick. If a GKS library is not available, UNICON can be moved to a system where a non-GKS graphics library is to be used. UNICON also provides system administrative functions, managing toolkits and establishing relationships between objects and tools.

System designers can use UNICON as a general-purpose system for building icon interfaces to UNIX* and other operating systems. UNICON's operating system interface module is small and comprises a few lines of C code. UNICON is designed to be independent of any operating system.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $395 – $10,000
Contact: Has Patel
(201) 544–1292
INFOLOGIC, INC.
Monmouth Mall, P.O. Box 778
Eatontown, NJ 07724

VAX–11/PROVUE

Operating System: VMS
Keywords: • Mapping • Presentation aids

This intelligent multiple-display control system for VAX/VMS systems allows both local- and remote-display stations. This complete package of hardware and software enables the user to build pictures and to control their display to reflect the status of any part of the process. That display control can be effected by the user's application programs or from any of the associated system keyboards. Built-in facilities allow operator interaction with the application system to acknowledge messages and input data to control the user process being monitored and displayed.

Refer to SPD #25.84.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $3570 – $8990
Contact: Consult your local DIGITAL sales office (see Introduction).

VAXstation Display Services

Operating System: VMS
Keywords: • CAD/CAM • Programming tools
• Software utilities

Distribution media: 9-track 1600 bpi magnetic tape, RA60, RC25, RK07, RL02.

VAXstation Display Services (VDS), the software component of the VAXstation 100 terminal, is comprised of the following components:

- VAXstation Human Interface, which enables the user to control and to run multiple terminal sessions at a single VAXstation terminal. That is accomplished by using virtual displays and windows.
- Terminal Emulation for DIGITAL VT100 and VT200 terminals and Tektronix 4014 with the Enhanced Graphics module. The terminal emulators can be initiated directly from the Human Interface or from an application program, using the VSTA library routines.
- VSTA Library, which enables applications to create, control, and remove virtual displays. The library routines provide a complementary function to the Human Interface. Thus, windows that are created by the Human Interface or an application are managed in a consistent manner from the user's point of view.

- CORE Graphics Library (CGL), a general-purpose graphics subroutine library that is based on the CORE graphics standard created by the Association for Computing Machinery (ACM) Special Interest Group on Graphics (SIGGRAPH).
- Native Graphics Procedures, which provide the application developer with a low-level interface to the graphics hardware. In general, those procedures provide less functionality but higher performance than the VSTA and CGL libraries procedures.

The VSTA and CGL libraries as well as the native graphics procedures are callable from seven VMS languages — Assembler, C, BASIC, FORTRAN, Pascal, PL/I, COBOL, and BLISS.

Refer to SPD #25.90.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $800

Contact: Consult your local DIGITAL sales office (see Introduction).

VIEW 3-D

Operating System: VMS

Keywords: • Mapping

Distribution medium: magnetic tape.

This graphics processing package is for use with line-drawing graphics devices, the scene being described by plane polygons and wire lines. The package allows hidden-line removal and both parallel and perspective projection. Viewing adjustments may be made interactively, and VIEW 3-D contains a MACRO object description facility. Text may be generated automatically. VIEW 3-D uses dynamic memory allocation (lists) to overcome any array size limitations and uses low-level graphical action commands only, for portability. DECUS number VAX–58.

Note: Corrections have been made to the hidden-line removal algorithm, as well as other minor improvements.

Price: $5 – $225

Contact: DECUS (see Introduction)

VIGL (VS(V)11 Interactive Graphics Library)

Operating System: VMS

Keywords: • Application development • Programming tools

This library of FORTRAN-callable graphics subroutines provides access to the graphics capabilities of the VS(V)11 graphics subsystem. VAX–11 VIGL graphics facilities, provided by the VIGL subroutine library, allow the user to create FORTRAN applications programs. The subroutines convert graphics requests into display lists containing VS(V)11–specific graphics instructions. The subroutines use the VS(V)11 Driver to send those display lists to the VS(V)11 graphics subsystem.

Refer to SPD #25.94.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $2500 – $4250
Contact: Consult your local DIGITAL sales office (see Introduction).

Visual:C–Chart

Operating System: VMS
Keywords: • Decision support • Development tools • Presentation aids • Programming tools

This graphics package is set of high-level C subroutines that turn data and text into publication-quality graphics. More than 250 Visual:C–Chart functions can be used to create a wide variety of charts and graphs.

Visual:C–Chart features multiple typefaces, filled typefaces, curve fitting, shadowing, and true, thick lines. The subroutines also automatically size titles and legends, scale axes, and adjust bar widths.

Visual:C–Chart, which can be integrated into other software applications, uses the ANSI/ISO GKS Standard.

Price: $8000 – $24,000
Contact: Igor M. Sill
(408) 945–9055
VISUAL ENGINEERING, INC.
2680 North First Street, Suite 200
San Jose, CA 95134

Visual:GKS

Operating System: ULTRIX–32, VMS
Keywords: • Development tools • Device drivers/handlers • Programming tools

This library of C subroutines is for the UNIX* programmer who needs high-quality, device-independent graphics. This implementation of GKS is designed for the multiple-device, multiuser UNIX* environment. An embedded virtual device interface (VDI) emulates hardware features in software so that graphics on one workstation are represented consistently and accurately on other workstations.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $5000 – $16,000
Contact: Igor M. Sill
(408) 945–9055
VISUAL ENGINEERING, INC.
2680 North First Street, Suite 200
San Jose, CA 95134

Visual:ProChart

Operating System: ULTRIX–32, VMS
Keywords: • Decision support • Presentation aids

This graphics application creates business graphics of exceptional quality without requiring programming or graphics experience. With almost 300 pages of on-line help and a special human-factors user interface, Visual:ProChart is easy to use yet flexible and powerful.

Visual:ProChart includes such presentation-quality features as filled typefaces and extra-thick plot lines that make your presentations professional and memorable. Since Visual:ProChart uses Visual Engineering's special implementation of the ANSI/ISO GKS Standard, you can generate graphics on almost any graphics device. Visual:ProChart gives you five preview levels to modify and edit a chart quickly and efficiently. Visual:ProChart also taps the multiprocess capabilities of UNIX* for flexibility in data acquisition and editing. Because Visual:ProChart accepts a simple ASCII text file format, your data can come from a spreadsheet, a data base, or another program.

Charts can be saved with or without data; thus, you can use your favorite chart formats as often as you like. Charts are saved in a concise, portable format requiring as little as 1 to 2K bytes that can be easily transported from one machine to another or from one user to another.

* UNIX is a trademark of AT&T Bell Labratories.

Price: $5000 – $16,000
Contact: Igor M. Sill
(408) 945–9055
VISUAL ENGINEERING, INC.
2680 North First Street, Suite 200
San Jose, CA 95134

VT105 GPA (VT105 Graphics Support Package)

Operating System: VMS
Keywords: • Presentation aids • Software utilities

The VT105 Graphics Package consists of 40 FORTRAN subroutines and 10 demonstration programs. The graphics subroutines perform functions that enable you to use the VT105 as a graphics terminal; the demonstration programs include examples of some of the graphics subroutines. The package also includes three spline-fitting routines that enable you to draw smooth nonlinear curves for data having relationships that cannot be easily defined automatically.

Documentation is on magnetic media. DECUS number VAX–9.

Price: $5 – $225
Contact: DECUS (see Introduction)

VT125 and VAX–11 RGL Presentation

Operating System: VMS
Keywords: • Presentation aids

This software helps VT125 users of VAX–11 RGL in preparing and giving presentations. The presentations would include "slides" generated with the RGL package and can use a slave color monitor to the VT125 or overhead slides prepared using a Bausch & Lomb ReGIS Plotter.

Documentation is on magnetic media. DECUS number VAX–42.

Price: $5 – $225
Contact: DECUS (see Introduction)

Wall

Operating System: MicroVMS, VMS
Keywords: • Architecture • CAD/CAM • Engineering

Memory required: 64K minimum.

This program, written in MACRO, draws a wall, based on user responses to prompts for the wall's dimensions and the dimensions of intersecting interior and exterior walls and windows. All lengths are entered in feet or inches, as required by the prompts. Angles of intersecting walls are measured in degrees in a counterclockwise direction from a reference line.

A version of this product is available for the PDP–11 computer.

Price: $500 – $15,000
Contact: Dean Lampman
(513) 874–4499
STARFLO ENGINEERING
4740 A Interstate Drive
Cincinnati, OH 45246

Window

Operating System: VMS
Keywords: • Documentation • Programming tools
• Simulation • Software utilities

This terminal-expansion and documentation utility enables you to run multiple interactive jobs from a single terminal and to see all those jobs on the same screen simultaneously. Designed for VMS and RSTS/E operating systems, Window can also be used to capture a job session in a text file and to interactively create training and support documentation. Window increases the power of your system by enabling you to do more work without buying new terminals.

A version of this product is available for the PDP–11 computer.

Price: $1200
Contact: Carolyn Clyde
(801) 224–5306
CLYDE DIGITAL SYSTEMS, INC.
P.O. Box 4500
Provo, UT 84603–4500

xroff

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Printing

This product will emulate a phototypesetter on low-resolution and high-resolution devices. The system prints troff- and ditroff-encoded documents on a laser printer; ink jet, nonimpact printer; or phototypesetter. The xroff software can take full troff, including tbl and eqn.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $3800 – $11,800
Contact: Judy C. Hobin
(408) 746–3754
IMAGE NETWORK
770 Mahogany Lane
Sunnyvale, CA 94086

Health Care

Elizabeth Crews/Stock, Boston

Accounts Payable Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Accounts payable • Cost accounting • Financial management • Report writer

Distribution medium: disk.

This fully integrated module, written in COBOL, assists in effective management of cash disbursements. The application monitors all discounts, captures and retains up to 99 periods of detail, contains multiple payment selection methods, and helps prevent duplicate invoice payment. Accounts Payable also features a rigid data security system, on-line vendor inquiry and search, and accumulation of YTD vendor payments. Moreover, the software allows unlimited on-demand check processing, multiple partial payments, and a void-check capability. Complete system reporting includes vendor directory, invoice activity log, GL distribution ledger, and purchase journal.

Price: Available upon request
Contact: David H. Shor
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

ADT/Census Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Data base management • Report writer • Scheduling • Statistics

Distribution medium: disk.

This complete real-time, on-line, and interactive patient registration system, written in COBOL, provides immediate access to patient location, bed reservation assignments, patient relocating capability, reversal of erroneous registration, retroactive ADT processing, and processing of multiple preadmissions and scheduling. ADT/Census automatically generates account numbers, captures charges, and embosses plates. Monitoring of patient locations and movements is facilitated by on-line, real-time inquiry by name, number, nurse station, and room/bed and automatic notification of discharge. Cyclical and on-demand reporting is available, including census reports by patient, nursing station, physician, and summary, as well as room/bed and physician directories.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Anatomic Pathology

Operating System: VMS
Keywords: • Information management • Medical

This modular system for the management of surgical pathology departments, including surgical (anatomical) pathology, cytology, histology, and autopsy functions, comes with integrated SNOMED coding and provision for unlimited free text. The highly interactive, easy-to-learn, on-line help system is available as an off-the-shelf package or with customization. Clinical and other vocabularies are stored in dictionaries that can be defined and maintained without programmer assistance. A report generator is included in the system, and unlimited user-defined reports can be created.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Denis R. Pombriant
(617) 964–7880
THE MUMPS COLLABORATIVE, INC.
797 Washington Street, Suite 1
Newton, MA 02160

APS (Accounts Payable System)

Operating System: VMS
Keywords: • Accounts payable • Statistics

Designed for health care facilities, APS features choice of payment by invoice or payment on account; automatic check writing and tape-to-tape check reconciliation; direct disbursements that generate internal invoice and direct posting to general ledger with multiple G/L distributions; and on-line inquiry of invoices or payments.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

Bacteriology Module: Leadership Series™

Operating System: MicroVMS, VAX DSM, VMS
Keywords: • Billing • Data base management • Report writer • Statistics

Distribution medium: magnetic tape.

The Bacteriology Module, written in MUMPS, provides a computerized data management system for a hospital microbiology laboratory. The on-line system produces statistical reports. The system also provides interim reporting of specimen results, including drug sensitivities; a complete report of bacteriology work for a patient being discharged; a daily master log of specimens; abnormal-results reporting; and instant 24-hour access to the bacteriology information stored in the computer. Bacteriology may be used simultaneously with the Laboratory, Blood Bank, Epidemiology, Pharmacy, and other chemical support systems available through Pentamation's Leadership Series.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Billing and Accounts Receivable System

Operating System: VAX DSM, VMS
Keywords: • Accounting • Billing • Insurance • Medical

This system, written in DSM–11, allows laboratory and pathology organizations to produce statements, bills, insurance claim forms, and tape/electronic transmissions for a variety of laboratory testing services and provides a full accounting capability with audit trails and appropriate accounting controls. For statements to clients, an extensive pricing system automatically accommodates multiple-fee schedules, medical specialty pricing, client-specific pricing, multiple-profile levels, unit discounts, volume discounts, and base-business discounts. For bills to patients, the system supports detail statements with multiple follow-up and reminder bills. Insurance processing features include carrier-specific pricing, profile assembly, procedure coding, diagnosis coding, and multiple-claim formats.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Bryan LeBlanc
(214) 231–6591
RUBICON CORP.
1200 E. Campbell Road
Richardson, TX 75081

Blood Bank Module: Leadership Series™

Operating System: MicroVMS, VAX DSM, VMS
Keywords: • Billing • Data base management • Inventory • Statistics

Distribution medium: magnetic tape.

The Blood Bank Module, written in MUMPS, maintains and controls data in a hospital blood bank. Complete blood product inventory, blood unit status, and disposition of blood derivatives, transfusions, reactions, atypical antibodies, and test results are maintained on line. The module produces listings of short-dated units of blood, blood-release information, and cross-match lists and interfaces with the ADT/Census and Registration Laboratory, and Pharmacy modules available through Pentamation's Leadership Series.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

C0-LAB

Operating System: VMS

Keywords: • Chemical • Information management • Medical

This modular system is for the management of clinical laboratories, including chemistry, hematology, serology, urine analysis, microbiology, and virology departments. The highly interactive, easy-to-learn, on-line help system is available as an off-the-shelf package or with customization. Clinical and other vocabularies are stored in dictionaries that can be defined and maintained without programmer assistance. A report generator is included in the system, and unlimited user-defined reports can be created.

A version of this product is available for the PDP–11 computer.

Price: $50,000 – $100,000

Contact: Denis R. Pombriant
(617) 964–7880
THE MUMPS COLLABORATIVE, INC.
797 Washington Street, Suite 1
Newton, MA 02160

CARE/DM

Operating System: VMS

Keywords: • Accounts receivable • Dental • Information management • Medical

This software may be licensed for single and multiuser timesharing, software distributors, and care centers as a turnkey system for single or group practices or for hospital physician billings. CARE/DM's parameter-driven structure provides flexibility for the multispecialty environment, with no limit on the number of physicians or patient accounts (subject only to the size and performance of the CPU and disk).

CARE/DM is a medical and dental office automation system used interactively to capture, control, process, and analyze patient service information. The system emphasizes accounts receivable management: service capture, billing, insurance forms preparation, and collection control. The primary design goal is to provide a single source of information entry with the automatic maintenance, application, and distribution of patient service information. Uniform processing procedures have been implemented to increase the accuracy, productivity, and effectiveness of administrative personnel.

The system includes patient information registration and billing, automatic insurance processing and ECS, microfiche records/magnetic history, service recording, reporting, patient and room scheduling, recall-notice preparation, referral tracking, contract payment plans, collection tracking and follow-up, letter writing, dental processing, model and storage inventory, access control and help, mail messages, notices, and parameter selection to provide customization for all medical/dental specialties, without programming changes.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $35,000
Contact: Kent M. Brost
(217) 522–2273
CARE INFORMATION SYSTEMS, INC.
3009 S. Sixth Street
Springfield, IL 62703

Case Mix Management Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Cost accounting • Data base management • Insurance • Report writer

Distribution medium: disk.

This module, written in COBOL, supplies a DRG data base for performance evaluation and follow-up. The module provides comparison reporting to HCFA peer groups, magnetic tape interface, identification of high-volume resource users, and monitoring of over/underuse of resources. Users have at their disposal profit-and-loss-margin analyses by DRG and physician. Fully integrated with other departments, Case Mix generates complete monthly reporting such as DRG frequency rankings, ancillary service/charge by DRG, and detailed service breakdowns by patient/physician/DRG. The semiannual comparative DRG report and annual DRG length-of-stay book are also produced.

Price: Available upon request
Contact: David H. Shor
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

CHARGER

Operating System: VMS
Keywords: • Calculation aids • Financial analysis • Statistics
Memory required: 256K.

This DRG (Diagnosis Related Group) prospective pricing software package for hospitals provides statistical and financial information based on the latest government DRG regulations for patient reporting and reimbursement. CHARGER automatically recognizes and flags per-diem or day- or cost-outlier conditions and calculates per-diem or outlier adjustments. The package separately projects both the direct reimbursement from health care intermediaries and the total reimbursement to teaching hospitals, including federal educational reimbursements. CHARGER interfaces readily with other hospital systems, such as billing, patient records, and case-mix analysis, to generate statistical reports and projections and may also be used interactively for evaluating individual cases.

A version of this product is available for the PDP–11 computer.

Price: $3000
Contact: Martha A. Scott
(617) 861–0670
EVANS GRIFFITHS & HART, INC.
55 Waltham Street
Lexington, MA 02173

CLIN–TEAMS®/Remote

Operating System: VMS
Keywords: • Data collection • Medical • Scientific

Developed by Technical Evaluation and Management Systems, Inc., this integrated, user-friendly, menu-driven, and protocol-driven system of programs is written for the clinical trial environment.

CLIN–TEAMS/Remote is offered in a BASIC–PLUS–2 version to run under RSX–11M or VMS operating systems and, with the appropriate software, can be transferred to small, remote computers for data collection. Data is collected by filling in case report form images on the CRT in the investigator's office. A simultaneous journaling option permits on-site generation of hard-copy CRFs. Data can be transferred back to a host computer at predetermined intervals for integration into the central data base.

Data collection formats for new studies can be set up (protocol compiled) interactively without reprogramming. Branching logic within the system provides the ability to go to specific questions, based on the response to the current question. CLIN–TEAMS/Remote provides the audit trails required by FDA guidelines. Additionally, CLIN–TEAMS/Remote provides a monitoring report–generating facility that allows the user to tailor interim reports; allows the unloading of data to a sequential data file for use with statistical-analysis programs such as SPSS, BMDP, and SAS; and allows other programs to run while CLIN–TEAMS/Remote is being used. Thus, CLIN–TEAMS/Remote can fit into a multiuser, multiprogramming environment on the host computer.

A version of this product is available for the PDP–11 computer.

Price: $46,500
Contact: Floyd E. Leaders, Jr., Ph.D.
(214) 386–5764
TECHNICAL EVALUATION AND MANAGEMENT SERVICES, INC.
13601 Preston Road, 820 Carillon Tower West
Dallas, TX 75240

Clini-CAL® Laboratory Information System

Operating System: VMS
Keywords: • Data base management • Medical • Scientific

This comprehensive turnkey system forboth large and small clinical laboratories is written in FORTRAN and interfaces with most lab instrument devices. Customized to meet a laboratory's specific needs, Clini-CAL computerizes laboratory data, generates reports, and manages quality control, sample processing, and billing. The system can be used in the clinical pathology laboratory, pulmonary respiratory therapy, and patient registration.

The system provides improved patient care through reduced turnaround time for routine and stat tests with DRG statistics and legible, concise test requests and reports; performs simplified statistical analysis; identifies abnormal results; and eliminates misplaced, erroneous billings.

A version of this product is available for the PDP–11 computer.

Price: $99,500 – $900,000
Contact: Allan G. Penny
(617) 237–7055
SYSTEM ANALYSIS CORP.
1 Hollis Street
Wellesley, MA 02181

CLINIC–MANAGER®

Operating System: VMS
Keywords: • Accounting • Information management • Medical
Distribution media: 800 bpi magnetic tape, RL02, RM03.

The modular CLINIC–MANAGER system is fully integrated, interactive, and complete. The software was designed from the user's viewpoint, and the package's CRT screens are logical and simple.

Software features include patient accounting and billing, claims and claims monitoring, practice statistics, appointments, medical records, general ledger, fee modeling, payroll, accounts payable, drug interaction, patient searches for recalls, and illness (diagnosis).

A version of this product is available for the PDP–11 computer.
Price: $10,000 – $75,000
Contact: Jim Baker
(405) 943–9818
EDP SYSTEMS, INC.
4900 N. Portland
Oklahoma City, OK 73112

Clinical Data Editor

Operating System: ULTRIX–32
Keywords: • Billing • Medical • Quality control
Memory required: 512KB. Distribution medium: 1600 bpi magnetic tape.

Clinical Data Editor, written in C and available as a module of HSI's Medical Records Information System, assigns a diagnostic related group (DRG) classification number and reimbursement rate, which is required for all hospital stays that are reimbursed by Medicare. The DRG classification grouper, the first component of this package, is the same as that designed for the federal government's Medicare Administrator, Health Care Financial Administrator (HCFA). The editor component of this package performs 26 edits on each DRG assignment to highlight any inconsistencies and to ensure correct reimbursement.
Price: $6600
Contact: Mark Engelhardt
(203) 562–2101
HEALTH SYSTEMS INTERNATIONAL
100 Broadway
New Haven, CT 06511

Clinical Support Systems: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Billing • Data base management • Report writer • Statistics
Distribution medium: disk.

These systems, written in MUMPS, provide interactive processing for hospital ancillary needs: bacteriology, blood bank, dietary, laboratory, laundry, pharmacy, and radiology. Timely and accurate ancillary service processing is promoted through easy access to and verification of patient diagnosis and biographic data from the patient data base. This integrated system features drug interaction and sensitivity analysis, abnormal-results reporting, blood product inventory, transfusion-reaction lists, test results reporting, IV and medication orders processing, delivery and production reporting, automatic assignment of specimen numbers, and complete capture of charges for transfer to the appropriate financial offices.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Collaborative Clinic System

Operating System: VMS
Keywords: • Financial management • Medical

This comprehensive financial management tool for clinics, group practices, health maintenance organizations, and other medical service suppliers includes modules for billing, accounts receivable, appointments scheduling, management reports, medical records, general ledger, and accounts payable. The highly interactive, easy-to-learn, on-line help system is available as an off-the-shelf package or with customization. Clinical and other vocabularies are stored in dictionaries that can be defined and maintained without programmer assistance. A report generator is included in the system, and unlimited user-defined reports can be created.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Denis R. Pombriant
(617) 964–7880
THE MUMPS COLLABORATIVE, INC.
797 Washington Street, Suite 1
Newton, MA 02160

COMPCARE (Comprehensive Care Centers)

Operating System: VMS
Keywords: • Billing • General ledger • Medical • Payroll

Distribution media: 9-track 1600 bpi magnetic tape.

The COMPCARE system covers patient history, billing (including third parties), payroll, general ledger, statistics, grant reporting, HHS reports, and so on. The system components are interactive, friendly, and complete — for use in-house or on a time-share system.

A version of this product is available for the PDP–11 computer.

Price: $30,000 +

Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Comprehensive Blood Bank System

Operating System: VAX DSM, VMS

Keywords: • Accounting • Medical

This product, written in DSM, addresses both the medical and financial requirements of the regional blood bank and includes donor solicitation and recruitment, blood processing and testing, blood and blood products inventory control and disbursement, patient compatibility and cross match, and administration and finance. Those features greatly assist in the recruitment of donors, as well as in the long-term record-retention requirements of blood banks.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Bryan LeBlanc
(214) 231–6591
RUBICON CORP.
1200 E. Campbell Road
Richardson, TX 75081

CP–Physician

Operating System: UNIX* (System V)

Keywords: • Billing • Data base management • Medical • Scheduling

This multiuser, multitasking medical office management system has facilities for weekly/monthly statements, insurance processing — crossover, copay, partial pay, Medicare, Medicaid write-offs — receipt processing — batch, individual, insurance claims — transaction entry — batch or individual — and appointment scheduling. Patients are accessed primarily by name, although number access is included. A guarantor index allows access to patient records if the patient's name and number is unknown but guarantor is known. Internal switching provides selection for special practice types, family billing, and anesthesiology. The system has no practical limits on patient numbers, on-line patient detail, on number of insurance companies, on number of practicing physicians, on number of procedure or diagnosis codes, and

on places of service. The system translates practice procedure and diagnosis codes into standard codes on insurance forms; a data base scan facility searches for patients associated with particular procedure or diagnosis codes. The system also offers extensive report capabilities for management.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $20,000
Contact: Donald H. Goeke
(205) 344–8100
CPSI
501 Bishops Lane
Mobile, AL 36608

CYTOPATH (Anatomical Pathology and Cytology Data Management System)

Operating System: ULTRIX–32, UNIX* (Berkeley)
Keywords: • Data collection • Medical • Scientific • Word processing

CYTOPATH is a data management system for data acquisition and retrieval in the anatomical pathology and cytology laboratory. The system is designed for long-term storage and retrieval of data and runs on all VAX machines.

System input screens and reports are defined by the customer, and customer access is provided to a query language for retrieval from the data base. Word processing is an integral part of the system and includes a text formatter, a text editor, and a spell check. The user can tailor the dictionary used in the spell check.

* UNIX is a trademark of AT&T Bell Laboratories.

Price: $40,000 – $400,000
Contact: Therese Holt
(801) 355–7100
BSL TECHNOLOGY
5060 W. Amelia Earhart Drive
Salt Lake City, UT 84116

DataCare

Operating System: VMS
Keywords: • Dental • Medical • Pharmaceutical

This system provides a complete data processing solution for community health care and is built around the relational data base management system IMPRS, which enables inexperienced users to create their own special reports. DataCare includes patient registration and scheduling, insurance billing, medical records, BCRR reporting, pharmacy, accounts payable, and general ledger functions.

A version of this product is available for the PDP–11 computer.

Price: $15,000 – $50,000

Contact: Mark A. Thomas
(913) 782–8544
RUF CORP.
1533 E. Spruce Street
Olathe, KS 66061

DEChealth (DECmed Occupational Health System)

Operating System: VMS

Keywords: • Environmental • Medical • Mental health • Personnel

Distribution medium: 9-track 1600 bpi magnetic tape.

VAX DEChealth integrates, analyzes, and reports employee and environmental surveillance data for occupational health professionals in industry, government agencies, and hospitals. VAX DEChealth allows access to vital medical, exposure, morbidity, mortality, work history, and demographic data in order to study the relationship between chronic and acute health impairment and exposure to specific toxic agents.

The system permits correlation over time of individual biologic responses with work area and specific agent exposures. That correlation provides the medical staff and the occupational health team with an early means of detection, treatment, intervention, and control of occupationally induced injury and illness.

VAX DEChealth is made up of three modules:

- The Employee Module identifies and characterizes the employees in an occupational setting. The employee data base contains the employee name, age, sex, employee number, and so on. In addition, this module permits a site to specify supplementary items to complete the employee profile.
- The Area Module defines the locations to be identified in tracking employees and agents. The definition of areas is performed through direct interaction with the system, so that new areas can be added or old ones deleted. Basic area reports can be produced that summarize the information in the area files.
- The Agents Module maintains a catalog of all chemicals, materials, and other substances used in the workplace.

The optional modules are the Health Services Module, which maintains a centralized data base of employee medical and exposure information; the Industrial Hygiene Module, which integrates the quantitative monitoring data from the workplace and the employee and area files; and the Reporting Module, which provides reports summarizing the data found in the system files.

Refer to SPD #25.78.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $49,000
Contact: Consult your local DIGITAL sales office (see Introduction).

Decision Support System: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Decision support • Electronic mail • Forecasting • Report writer

Distribution medium: disk.

This system, written in COBOL, facilitates the decision-making process by providing executive reporting, confidential profiles, financial forecasting, data communications, electronic mail, report writing, ad hoc reports and projections, spreadsheet analysis, and personal computer communications. The system provides a window into the hospital's base of information, thus giving management an instant snapshot graphically spotlighting data such as census, accounts receivable, physician activity, and personnel status.

The Decision Support System software is a combination of modules developed by Pentamation, DIGITAL, and other third parties.

Price: Available upon request
Contact: David H. Shor
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

DECrad (DECmed Radiology System)

Operating System: VMS
Keywords: • Billing • Information management • Medical • Scheduling

Distribution medium: 9-track 1600 bpi magnetic tape.

VAX DECrad is an application system for data management in a diagnostic radiology department. The system provides diagnostic reports, billing information, scheduling, tracking, and statistical information in a usable, flexible format.

VAX DECrad can register and track patients, schedule examinations, and create, edit, and process radiology reports. DECrad also tracks radiology library materials, such as x-ray film folders.

VAX DECrad is comprised of seven modules:

- Patient Registration permits the entry of patient name, date of birth, hospital number, and insurance information. For patients who are registered in the system, only missing medical data or corrections need to be entered. System users can access and display information on a CRT.

- Examination Scheduling is for scheduling radiological examinations. The user can specify scheduling parameters, or times and rooms can be assigned by the system. VAX DECrad informs the user of and takes into consideration such factors as conflicting exams and patient preparation. The system produces all the forms necessary for the examination and prints bar code labels that can be attached to x-rays or to other forms for unique identification by a bar code reader. The system can request pulling of radiographic film folders from the library.
- Patient Tracking permits department personnel to monitor the flow of patients through the department, using prestored information about the length of examinations. Excessive examination delays are flagged, and work flow statistics are available to department managers.
- Film Library Management tracks the location of diagnostic materials stored in the department or in archival storage.
- Diagnostic Reporting includes a text processing subsystem to enter and edit diagnostic report information. Clerical staff use CRT terminals to enter dictated examination findings.
- Accounting maintains fee schedules for examinations performed in the department. Separate fee schedules are established for hospital and professional charges.
- Management Reports provide many arrangements of information about department activities for regulatory or utilization requirements.

Refer to SPD #25.77.xx when requesting further information on this product from your local DIGITAL sales office.

Price: $36,500

Contact: Consult your local DIGITAL sales office (see Introduction).

Dietary Scheduling System

Operating System: VMS

Keywords: • Calculation aids • Production control • Scheduling • Statistics

This system provides menu planning and a patient's dietary profile (linked to a common data base used by PAIS, MRS, and RXS) and includes dietary restrictions and likes/dislikes. Used with the daily menu, this system produces patient meal cards that are coded for special diets, as well as production schedules.

This system includes a nutritional analysis module that enables dieticians to analyze any food item or an entire sample meal or cycle for nutritional components.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

Doctor Billing

Operating System: VMS
Keywords: • Accounting • Billing • Medical • Statistics

Distribution media: magnetic tape, RL02.

This system tracks charges by patient or provider. Insurance and patient billing are featured with tracking of accounts receivable. Statistical reporting by doctor or service is automatically produced.

A version of this product is available for the PDP–11 computer.

Price: $5000
Contact: David L. Ley
(313) 855–6181
RADLEY BUSINESS COMPUTERS
7071 Orchard Lake Road, Suite 305
W. Bloomfield, MI 48033

Episodic Billing System

Operating System: VMS
Keywords: • Accounts receivable • Billing • Medical • Statistics

Suitable for either a stand-alone or a time-sharing environment, this interactive system handles the billing, collection, and statistical-gathering functions in hospital-based radiology and pathology. The system accumulates all charges for the patient until services are completed and manages accounts that need not be kept active.

The system offers reminder messages on statements, dunning letters, and optional automatic writeoffs of selected accounts. Also, the system displays all activity in a patient's account, accepts data on other computer media, produces media for insurance companies' computers, and searches for patients by either account number or name. The system produces a complete set of management reports, patient and insurance statements, and a detailed trail.

A version of this product is available for the PDP–11 computer.

Price: $7900 – $12,500
Contact: Philip Lieberman, President
(812) 424–4974
PHILIP LIEBERMAN & ASSOCIATES, INC.
514 S.E. First Street
Evansville, IN 47713

Executive Reporting Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Decision support • Electronic mail • Report writer
Distribution medium: disk.

This fully interactive module, written in COBOL, allows health care executives to formulate required reports without regard to content, format, or sequence. Relational data base join allows integration of information from separately maintained files. Restricted file access guarantees security and file integrity. Executive Reporting provides up-to-date, accurate snapshots of vital performance statistics such as on-line access to census, receivables, and revenue statistics; current year and period statistics; and useful documentation for historical purposes or presentations. All screens may be printed. The application also includes electronic mail and extraction and down-loading of user-selected files to personal computers.

Price: Available upon request
Contact: David H. Shor
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Financial Management System: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Accounts payable • Accounts receivable
• Fixed assets • General ledger
Distribution medium: disk.

This system, written in COBOL, provides fully interactive patient accounting, general ledger, accounts payable, human resource management, fixed assets, case-mix analysis, material management, and cost accounting. The system guarantees data integrity and accurate, timely records. The general ledger chart of accounts validation prevents invalid account numbers at the subsidiary module level. On-line control directories eliminate the need for programmer modifications. Multiple company/organization capability allows for easy system expansion. The system includes on-line proration, rebilling, retroactive revenue posting, comparative analysis, and mail-ready UB–82s. Comprehensive reports are provided in attractive formats.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Financial Modeling Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Decision support • Financial analysis • Financial planning • Graphics

Distribution medium: disk.

This module, written in COBOL, is an integrated application that assists in evaluating marketing conditions and projecting outcomes based on simulations. The system projects results based on comparison of user-supplied variables with selectively down-loaded historical data. Financial Modeling produces pie and bar charts, grid patterns, line graphs, hatching patterns, and simultaneous modeling and color graphics. The application also provides data import/export, plotters, and mathematical and statistical computations. The module's confidential profile function allows access to performance and/or status information on personnel, physicians, vendors, patients, and VIPs.

Price: Available upon request
Contact: David H. Shor
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Fixed Assets Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Fixed assets • Forecasting • Maintenance • Property management

Distribution medium: disk.

This module, written in COBOL, is a means to capture and monitor property-related data such as acquisition and disposal, identification, assignment, insurance coverage, warranty, maintenance, lease, and capitalization/depreciation scheduling. Fixed Assets helps the user to track and identify property, maintain depreciation schedules, project and plan down time, and monitor lease and maintenance agreements. Cyclical and demand reporting is available, including acquisition and disposition transactions listings, tracking reports, asset investment tax credits, insurance evaluation, and ADR/ACRS table lists.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Flow Gemini Occupational Health Information System

Operating System: VMS
Keywords: • Data base management • Information management • Medical

This comprehensive and flexible system meets the information storage, processing, and retrieval needs of health professionals in industries with potential employee health and safety hazards. Physicians, toxicologists, industrial hygienists, epidemiologists, and safety personnel in major U.S. and Canadian corporations use Flow Gemini. Major design features include flexibility and user independence in changing the structure of the data base and the standard Flow Gemini reports.

Price: $90,000 – $150,000
Contact: Wanda Rappaport
(703) 893–5915
FLOW GENERAL INC.
7655 Old Springhouse Road
McLean, VA 22102

General Ledger Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Cost accounting • General ledger • Report writer • Spreadsheets

Distribution medium: disk.

This module, written in COBOL, assists in transaction posting, budgeting, cost accounting, and reporting in the health care environment. The module provides full data protection, complete audit trails for both internal and external requirements, and a rigid security structure. With multiple corporation/organization capability, General Ledger helps users achieve effective cost control/analysis and flexible budgeting. The application contains selective reporting on expenses, revenues, assets, liabilities, and capital accounts; multiple unique subledgers; statistical transactions capture; variable closes for a period; and projections on actual or budgeted amounts through spreadsheet interface.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

GLS (General Ledger System)

Operating System: VMS
Keywords: • Cost accounting • Financial analysis • General ledger • Statistics

Designed for health care facilities, GLS features automatic extract and post routines from A/R, A/P, and payroll in either detailed or summary form. GLS is based on the Uniform Chart of Accounts with a crosswalk to a facility's own numbering system (if different). GLS includes a budget system based on G/L account numbers, with monthly and year-to-date comparison of expenses to budget allocation, an automatic posting of recurring entries, and an automatic reversal of statement entries.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

Group Purchasing System

Operating System: VAX DSM, VMS
Keywords: • Accounts receivable • Inventory • Medical • Purchasing

Distribution medium: magnetic tape.

This on-line purchasing service for ordering supplies, written in MUMPS, consists of purchasing, contract analysis, and billing modules. The purchasing section generates an order with a computer- or hospital-assigned purchase order number. The purchasing module selects the vendor with the best buy for each product ordered. The contract analysis module permits the purchasing service to create files of contracts for related items with prenegotiated prices for a specified time period. Reports from that module enable the purchasing service to determine the amount due from vendors, based on dollar volume of purchasing orders. Product listings provide documents for purchasing agent referral.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

HDS/II (Healthcare Data Systems)

Operating System: VMS
Keywords: • Billing • Financial analysis • Payroll • Pharmaceutical

This comprehensive interactive system for long-term health care facilities is divided into several modular subsystems that may be implemented separately or in combination: Patient Accounting and Information System (PAIS), Medical Records System (MRS), Patient Funds System (PFS), Payroll and Staffing System (PASS), Personnel Information System (PINS), Accounts Payable System (APS), and General Ledger System (GLS). Some outstanding features are third-party billing, automatic Medicare/Medicaid reconsideration, automatic crossover of coverage, all parameter-driven systems, remote-processing capabilities, and multiple-terminal support.

Installation includes on-site training and conversion and user manuals with continuous update service.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: David M. Pollack, President
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

HIS (Health Physics Information System)

Operating System: VMS

Keywords: • Information management • Medical • Nuclear

The HIS menu-driven programs use a powerful relational data base management system for the routine management and control of health physics information:

- The Personnel Exposure Records (PER) function provides record keeping, identification, and reporting of current and historical exposures. Individual exposure-category or parts-of-the-body entries can be made.
- The Radiation Work Permit (RWP) maintains RWP-related information, including budgetary exposure and work hours for chosen jobs, departments, or companies.
- The Access Control (AC) function allows the user to designate multiple areas of potential exposure and to control access to those areas through one system with multiple terminals. Real-time current exposure control is possible by using access-control terminals.
- The Equipment Control and Utilization Package (ECUP) combines instrument calibration, equipment inventory, source inventory, respiratory protection requirements, employee training records, and surveillance scheduling.

Other software applications include a data base and graphic display capability for area radiation survey information. The apparent reduction potential/achievability index package provides tools to analyze the cost effectiveness and the exposure reduction of various exposure-reducing methods.

Price: $40,000 – $150,000
Contact: Terry Gahl
(404) 434–9889
NUCLEAR DATA, INC.
2734 South Cobb Industrial Boulevard
Smyrna, GA 30080

HIS (Hospital Information System)

Operating System: MIIS/MAGIC
Keywords: • Accounting • Information management • Medical

This system includes 18 patient care and financial software applications: Admissions, Medical Records, Case Mix Management, Radiology, Pharmacy, Nursing/Workload Management, Laboratory, Microbiology, Surgical Pathology, Blood Bank, Billing/Accounts Receivable, Accounts Payable, Materials Management, General Ledger, Fixed Asset Accounting, Payroll/Personnel, Nurse Station Communications, and Resource/Appointment Scheduling. Each of those can be installed individually or in groups sharing interfaces with our other modules or with other vendors' systems. HIS features time-tested software and planned computer redundancy. Users have a choice of financing options, as well as the ability to install the system in phases and expand it.

The programs are written in MIIS (MEDITECH Interpretive Information System), a MUMPS dialect.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: MEDITECH
(617) 329–5300
MEDITECH
MEDITECH Circle
Westwood, MA 02090

Home Health Management

Operating System: VMS
Keywords: • Billing • Data collection • Medical • Scheduling

This system provides data processing support for a home health care agency. The objectives are to speed up the collection of receivables, to increase the speed and accuracy of patient visit controls, to control the number of people required to operate the business, to eliminate paperwork, and to improve access to historical records. This design philosophy of the system allows flexibility, effective operation, and ease of use. The user can manage information and expand the system as needed.

The system addresses many aspects of the home health care industry, including marketing, patient registration, personnel, scheduling, visit processing, staff productivity, and accounting.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $10,000

Contact: Paul Balcerzak
(614) 766–0204
CORTRON CORP.
1998 Tewksbury Road
Columbus, OH 43221

Hospital Laboratory System

Operating System: VAX DSM, VMS

Keywords: • Asynchronous communication • Medical • Order entry • Quality control

This system, written in DSM, provides an on-line, 2-way interface to an institution's hospital order communications system in order to facilitate ordering, status and result inquiries, and STAT reporting to the nursing stations. Orders for laboratory testing are processed by the specimen collection subsystem, which consolidates test requests and performs container selection and minimum volume calculations. The specimen container–label production and draw scheduling can optimize service levels and reduce work for the phlebotomy team. The system offers positive receipt verification of specimens, a worksheet, and a results entry subsystem.

A key service feature is the ability to delta check a new result against past results for inpatients. The result reporting function produces cumulative length-of-stay patient reports, interim results reports, STAT/call reports, discharge reports, and microfiche. The microfiche records results and a date/time/responsible individual indicator for significant steps in the testing process. This archival storage of information can be critical in a fact-determining process involved with any claim versus a physician or a hospital.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Bryan LeBlanc
(214) 231–6591
RUBICON CORP.
1200 E. Campbell Road
Richardson, TX 75081

HSI®/Coder™

Operating System: ULTRIX–32

Keywords: • Data entry • Medical

Memory required: 512KB. Distribution medium: 1600 bpi magnetic tape.

Coder, written in C, is a module of MRIS and provides the ICD–9–CM (International Classification of Diseases, 9th Edition, Clinical Modification) code number when an English-language disease and/or procedure description is entered. Coder also speeds the coding process in the medical records department of a health care institution, allowing patient bills to be sent out more quickly with less work.

The system is tailored to experienced coders, because short 1-line disease or procedure descriptions are often sufficient for an experienced coder to properly obtain the correct ICD–9 code. If more in-depth information is needed, a second screen shows the verbatim ICD–9 text, including all diseases/procedures that are excluded, included, or related.

Price: $5500
Contact: Mark Engelhardt
(203) 562–2101
HEALTH SYSTEMS INTERNATIONAL
100 Broadway
New Haven, CT 06511

Human Resources Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Financial planning • Forecasting • Personnel • Report writer

Distribution medium: disk.

This module assists in effective personnel administration in the health care environment. The module helps in the administration of comprehensive benefits and equitable salary programs, the conducting of successful recruiting, and the capture of complete historical information on all personnel. The Human Resources application provides on-line control tables, employee and applicant skills search and selection, comparative reporting, and government reporting for EEOC and tax liability. The user specifies such things as information-retention periods for decision parameters.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Independent Laboratory System

Operating System: VAX DSM, VMS
Keywords: • Asynchronous communication • Data collection • Medical • Order entry

This product, written in DSM, offers on-line entry of order requisition data to include client-specific test requesting and patient demographic information. The orders are converted from a client structure to the individual components so that the order can be exploded and work distributed to the performing medical departments. Worklists are produced, containing the appropriate quality control and standard specimens, as well as the patient specimens in a format specific to the bench technician. The system accepts test results manually and automatically and subjects each result to a real-time review based on patient demographic characteristics that include species, age, and sex versus a set of master file tables.

An extensive comment and message capability allows the appropriate medical technologist or pathologist interpretation to be recorded. The patient results are then reassembled on an order basis for reporting to the ordering physician. The reporting system offers client-specific tailoring and a number of transmission options. An autodial feature allows the laboratory system to connect to terminals at client locations or remote laboratory sites for automated report production.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Bryan LeBlanc
(214) 231–6591
RUBICON CORP.
1200 E. Campbell Road
Richardson, TX 75081

InteRx™

Operating System: VAX DSM, VMS

Keywords: • Accounts receivable • Inventory • Pharmaceutical • Retail

This retail pharmacy system consists of optional inventory, accounts receivable, and institutional modules. The InteRx system is for use in community pharmacies, nursing homes, and hospitals.

Work is performed in an interactive environment at a CRT, using a full-screen format; that is, the user specifies the function — for example, "entry of an Rx" — and the CRT screen is filled with prompts at half intensity and entries for each prompt at full intensity. Patient-profile information appears in the same fashion, enabling the user to distinguish between header and patient information.

InteRx is extremely flexible in order to meet each customer's needs. Since many parts of the system are parameter driven, InteRx can be tailored to each user. InteRx eliminates the need to fill out third-party claim forms, makes rejected claims easy to correct, eliminates patient-profile ledger cards, accurately prices prescriptions, and provides useful management reports.

The features of InteRx provide:

- On-line patient profiles, including allergy and diagnosis; patient lookup by name or number; and simple procedures for changing and adding profile information
- Automatic refills by entering prescription number, automatic production of prescription labels and receipts, directions entered from the doctor's prescription in Latin and printed in English or Spanish, and precautionary warnings as part of the prescription label
- Automatic third-party billing and resubmission of rejected claims, drug price updates and inquiry, special pricing, and provision for compounded prescriptions
- Automatic checks for allowable number of refills, refill too soon, nonrefillable drugs, less than effective medications, drugs not covered (by plan), and interaction warnings
- Dispensing and receipts reports, operating statistics, and patient lists and profiles

The Institutional InteRx module includes on-line patient admission functions, bed census reports, on-line creation and modification of physician orders, production of physician orders and medication sheets, and full and modified unit dose, drug utilization, and history reports.

A version of this product is available for the PDP–11 computer.

Price: $7500 – $12,500

Contact: Edward Muller, Director of Marketing — Pharmacy
(201) 256–7633
INTERACTIVE SYSTEMS AND MANAGEMENT CORP.
1500 Cardinal Drive
Little Falls, NJ 07424

intRlab

Operating System: VAX DSM

Keywords: • Asynchronous communication • Data collection • Medical • Order entry

This system, written in DSM and designed for the emerging post-DRG clinical laboratory, provides the flexibility and control mechanisms necessary to adapt to changing business conditions. This fully configured data processing solution provides all hospital/commercial laboratory–system requirements, including billing and accounts receivable and marketing/management reporting.

For the joint-venture laboratory, which must support hospital inpatient requirements as well as compete in the commercial marketplace, the system supports the high-volume batch processing techniques and the "STAT" lab(s).

The intRlab system supports the hospital-based laboratory and provides cumulative reporting, quality control, delta checking, pathology indexing, automated instrument results capture, and extensive hospital information system interfacing.

The intRlab system is able to automate the independent or commercial laboratory. Tools are provided to improve customer service and reporting, manage lab workflow, and increase markets. Additionally, a flexible and open-ended local and remote networking capability allows remote laboratories or locations to be connected.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Bryan LeBlanc
(214) 231–6591
RUBICON CORP.
1200 E. Campbell Road
Richardson, TX 75081

JSI/MIS (John Snow, Inc./Medical Information System)

Operating System: ULTRIX–32

Keywords: • Billing • Information management • Insurance • Medical

Memory required: 128KB.

JSI/MIS, developed jointly with CDD and written in C, is a comprehensive modular medical software package that includes billing, insurance claim preparation, practice analysis, appointment scheduling, and medical records functions. This easy-to-use clinical data-processing system provides cost-effective medical business management and convenient storage of patient information. JSI/MIS software combines the latest information-processing technology with JSI's experience in the requirements of community health centers, group practices, family planning organizations, and health maintenance organizations to offer an advanced and complete medical system.

The system features a module to meet the reporting requirements of federally funded clinics and health centers. That module maintains encounter and user data for BCRR reports and census tract data for patient origin studies (MUA). The module also automatically posts sliding-fee-scale adjustments based on patient income and family size. Transaction information can be accessed by program and department, thus simplifying reporting and analysis. JSI/MIS with the federal reporting module is ideal for community health centers, Title X family planning centers, certified rural health clinics, and other health centers that require expanded reporting functions.

A version of this product is available for the PDP–11 computer.

Price: $12,000 – $40,000

Contact: Daniel D. Moriarty
(617) 482–9485
JSI
210 Lincoln Street
Boston, MA 02111

Laboratory Data Management System

Operating System: VAX DSM, VMS
Keywords: • Information management • Medical • Order entry

This product is written in ANSI standard MUMPS and runs on DIGITAL micros, minis, and VAXs. This table-driven product aids the user in performing all laboratory functions from order entry to reporting and includes quality control, results entry and calculation, statistical plotting, management reporting, worklist production, and autodial reporting.

A version of this product is available for the PDP–11 computer.

Price: $14,490 – $56,752
Contact: Richard R. Brink
(214) 422–1022
ANTRIM CORP.
101 E. Park Boulevard, Suite 855
Plano, TX 75074

Laboratory Module: Leadership Series™

Operating System: MicroVMS, VAX DSM, VMS
Keywords: • Billing • Biology • Data collection • Report writer

Distribution medium: magnetic tape.

The Laboratory module, written in MUMPS, gives hospital laboratories control of both daily lab test processing and internal and external reporting. The on-line system records ordered tests, results, and comments; produces worksheets and labels; and can assign specimen numbers. The system includes numerous report capabilities and automatic client and/or physician billing. The quality control and preventive maintenance features monitor and regulate the quality control tests and preventive maintenance tasks in a hospital laboratory. Automated laboratory equipment can be interfaced to the system, as well as Bacteriology, Blood Bank, and other pertinent systems in Pentamation's Leadership Series. The Laboratory application is also available as a stand-alone system.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Laundry Module: Leadership Series™

Operating System: MicroVMS, VAX DSM, VMS
Keywords: • Billing • Inventory • Production control • Property management

Distribution medium: magnetic tape.

The Laundry application, written in MUMPS, provides a central hospital service with complete control of all laundry activities. The system maintains an account of laundry material received by and delivered to each hospital and/or hospital section. This system automatically charges for the quantity of processed and replaced items on a biweekly basis. Each hospital area can receive clean laundry based on a schedule determined by a delivery category: standard, soil count, and weight after wash. A daily production report and a daily delivery report are generated. Other biweekly and monthly reports are available for overall management of the laundry service.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Data base management • Financial management • Medical • Report writer

Distribution medium: disk.

This on-line, interactive, fully integrated hospital information system features patient management, financial management, clinical support, and decision support systems. The systems, written in either COBOL or MUMPS, are flexible enough to meet unique health care management needs without programmer modifications, even allowing the use of personal computers/workstations to down-load data from the main CPU. This series allows straightforward interfaces to other applications and easy integration of future product releases and enhancements. Its modular design allows a complete, single-vendor approach to all financial and clinical processing needs. On-line help and electronic documentation allow users to learn while they work. Full on-site system, technical, and computer engineering support is available.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

MAPS (Medical Accounting Patient System)

Operating System: VMS
Keywords: • Accounting • Billing • Dental • Medical

MAPS offers timely reporting, accounting, and analyses for a single physician or a clinic. Reports and analyses can be made by department, physician, location, current month, and year to date. Demographic information of patient and/or guarantors can be retrieved instantaneously. MAPS is a complete financial package that has interacting payroll, general ledger, and accounts payable and receivables.

The system can schedule appointments; prepare insurance forms; reduce disallowed insurance claims through correct procedure codes; post to patient accounts, allowing immediate payment of month-end billing; improve collection percentages by monitoring delinquent accounts and preparing stimulating notices; eliminate lost billings by accounting for all charge vouchers; allow more time for patient care by reducing the time spent with clerical work; and improve patient relations by providing accurate and timely information regarding patient accounts.

Each program produces daily, weekly, monthly, or year-end analysis reports.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $20,000
Contact: William R. Paschal, Jr.
(405) 843–7323
DATATEK CORP.
818 N.W. 63rd
Oklahoma City, OK 73116

Material Management Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Inventory • Materials handling • Purchasing • Report writer

Distribution medium: disk.

This module, written in COBOL, provides multiuser on-line access to a highly flexible perpetual inventory system. Fully integrated to interface with other financial and patient management modules, Material Management helps users to control inventory costs, establish cost caps, track item movements from issue to charge-out, eliminate item stock-

outs, and maintain optimum inventory levels. The application supplies a number of master directories, including stock and nonstock item, vendor, and location directories. Inventory purchase decisions and inventory distribution control and accounting are facilitated. On-demand reporting options are available.

Price: Available upon request

Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

MBS (Medical Billing System)

Operating System: VMS

Keywords: • Accounts receivable • Billing • Medical

This time-sharing system for a single or group practice manages all phases of accounts receivable for specialty groups. MBS records charges, payments, and adjustments by physician and place of service. The system provides daily journals and balance procedures and regular and cycle billing. MBS provides an extensive history of procedures performed, aged trial balances, collection notices, insurance processing, automated claims transmission, and management reports.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $10,000

Contact: Ed Kelleher, President
(803) 796–8858
MACRO, INC.
121 Professional Avenue
West Columbia, SC 29169

Medical Billing and Accounts Receivable

Operating System: VAX DSM, VMS

Keywords: • Accounts receivable • General ledger • Sales analysis

This product is written in ANSI standard MUMPS and runs on DIGITAL micros, minis, and VAXs. This table-driven product accommodates the needs of laboratory billing, as well as radiology, cardiology, and individual practitioners. The system provides a variety of fee schedules, special prices, and automatic price changes. Multiple insurance carriers may be billed, using claims, tapes, or electronic transmissions, as well as direct patient and client billing. The system also generates a complete set of financial and sales analysis reports.

A version of this product is available for the PDP–11 computer.

Price: $15,697 – $60,375
Contact: Richard R. Brink
(214) 422–1022
ANTRIM CORP.
101 E. Park Boulevard, Suite 855
Plano, TX 75074

Medical Office Manager

Operating System: VMS
Keywords: • Accounts receivable • Dental • Medical

This software, written in DIBOL, was designed to increase the cash flow of the professional office. This program, in a remote batch entry mode from a microcomputer or an on-line data entry for service bureaus, produces:

- Year-to-date detail produced on microfiche or hard copy on a weekly basis. This simulates on line for remote batch clients without the expense. This report contains every one that has entered the practice for the year.
- Account summary, which holds name, account number, phone number, last charge date amount, last payment date and amount, and type, account balance, billing status, delinquent status, batch listing, and aging of receivables.
- Alphabetical listing for anyone ever in practice.
- Statements.
- Delinquent documents for tracking activity on accounts.
- Doctors' reports and business analysis.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Royal Eccles, Vice President
(801) 394–0171
MANAGEMENT SCIENCES
905 24th Street
Ogden, UT 84401

Medical Records System

Operating System: VMS
Keywords: • Information management • Medical

This computerized medical records system is functionally similar to COSTAR but incorporates several enhancements and simplifications. The system can integrate the medical records software with appointments scheduling, billing, and accounting software. The highly interactive, easy-to-learn, on-line help system is available as an off-the-shelf package or with customization. Clinical and other vocabularies are stored in dictionaries that can be defined and maintained without programmer assistance. A report generator is included in the system, and unlimited user-defined reports can be created.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Denis R. Pombriant
(617) 964–7880
THE MUMPS COLLABORATIVE, INC.
797 Washington Street, Suite 1
Newton, MA 02160

Medication/Treatment Sheet System for Nursing Homes

Operating System: VMS

Keywords: • Medical • Pharmaceutical

Distribution media: RK01, RK02, RX01, RX02.

This program maintains all medications, treatments, diagnoses, diets, activities, and census information for each patient of the nursing home facility. The program prints medication sheets, treatment sheets, physicians' orders, census summaries, and a wide array of analytical reports that can be used for studies showing correlations in various fields (such as the number of a certain diagnosis occurring in a specific age group).

The software can retain history or purge a set of transactions for a certain time period. Thus, the program gives the operator the chance to recreate any activity for as far into history as the file has been purged.

A version of this product is available for the PDP–11 computer.

Price: $1500 – $4500

Contact: Larry Triplett, President
(614) 826–7678
TRIAD DATA PROCESSING
36 E. Main Street
New Concord, OH 43762

MediCom©

Operating System: ULTRIX–32, UNIX* (System III, System V)

Keywords: • Dental • Medical • Scheduling • Word processing

MediCom is a medical management system that can help run a physician's office efficiently and accurately. MediCom keeps track of all medical codes (ICDA, CPT), insurance, payments, recalls, statements, G/L, family billing, and guarantor reference accounts. Patient history in a data base and open-item and balance-forward billing make this a state-of-the-art package. MediCom is written in RM/COBOL for flexibility.

* UNIX is a trademark of AT&T Bell Laboratories.

A version of this product is available for the PDP–11 computer.

Price: $1000 – $2500
Contact: Don Walkup
(312) 931–1400
ICS COMPUTERS, INC.
37 Fountain Square Plaza
Elgin, IL 60120

MRIS (Medical Records Information System)

Operating System: ULTRIX–32
Keywords: • Information management • Medical

Memory required: 512KB. Distribution medium: 1600 bpi magnetic tape.

MRIS, written in C, is a stand-alone system available as a complete system or as separate modules. The modules include Master Patient Index, Patient Abstracting, Standard and Custom Report Generation, Chart Locator, Chart Deficiency, Clinical Data Editor, and Coder. The system provides all the benefits of electronic filing, such as reduced filing error and faster retrieval. In addition, a summary of clinical data (patient abstract) for each patient is available for quick retrieval and for use in preparing in-house and regulatory reports. Medical chart integrity is maintained by the Chart Deficiency and Locator modules.

Price: $24,000
Contact: Mark Engelhardt
(203) 562–2101
HEALTH SYSTEMS INTERNATIONAL
100 Broadway
New Haven, CT 06511

MRS (Medical Records System)

Operating System: VMS
Keywords: • Accounts receivable • Data collection • Medical • Statistics

This program is fully integrated with PAIS (Patient Accounting and Information System) and operates from a common data base. MRS accepts up to nine diagnoses in ICD–9 coding, maintains medical and psychological profiles on patients, and evaluates the level of care.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

NHIS (Nursing Home Information System)

Operating System: MicroVMS, VMS
Keywords: • Accounting • Medical • Payroll

This menu-driven accounting system, designed to maximize productivity and enhance the profitability of nursing home and ACLF facilities, includes Patient Trust, with Medical Records, Electronic Claim Submission, and Utilization Review modules to be added. Backup support is provided by PSI's team of technical and accounting consultants. Current regulations and financial requirements are incorporated into all NHIS programs, which are continually being updated to meet changing regulations and guidelines.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Philip Cox
(904) 378–4040
PROFESSIONAL SYSTEMS INTEGRATION
P.O. Box 14545
Gainesville, FL 32604

Order Communications Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Billing • Interpreters • Medical • Order entry
Distribution medium: disk.

This module, written in COBOL, facilitates quick, convenient generation of patient orders while ensuring capture of accurate charges. As a totally integrated module, Order Communications draws information from established data bases such as ADT/Census, medical records, patient accounting, and diagnostic data from clinical applications. The module offers selective alpha or numeric patient search, verification of order data at time of entry, and a "Synonym Catalogue" that translates physician terminology to ancillary service terminology. Additionally, the application specifically assists ancillary departments with order modification, complete results integration, and billing functions.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

PAIS (Patient Accounting and Information System)

Operating System: VMS
Keywords: • Accounts receivable • Billing • Data collection • Statistics

This program provides an accounts receivable system for health care facilities and includes admissions, discharges, and transfers; cash receipts; ancillary charges; private and third-party billing by magnetic tape or hard copy; and patient statistics.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

Paramedics Billing

Operating System: VMS
Keywords: • Accounts receivable • Billing • Insurance • Medical

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

Paramedics Billing is a simple-to-use, interactive, comprehensive, and complete method for charging and billing for paramedics' or ambulance runs by private firms or government agencies. Included are integrated insurance filing, accounts receivables, statistics, aging, and so on.

A version of this product is available for the PDP–11 computer.

Price: $5000 – $8000
Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

PAS–11/M (Professional Accounting Series–11/Medical)

Operating System: VMS
Keywords: • Accounting • Insurance • Medical

Memory required: 512KB. Distribution media: 800/1600 bpi magnetic tape, RL02, RX50.

The PAS–11/M series, written in FORTRAN–77, provides these critical features:

- Complete accounts receivable functions — automatic statement-form preparation, detailed aging reports, delinquent-accounts reports, and practice analysis and management reports
- Complete accounts payable functions, with either cash or accrual accounting, automatic check writing, vendor data files, and detailed aging reports

- An integrated general ledger accounting system tailored to your accountant's specifications, with extensive financial reports
- Detail of accounting data retained on line throughout your fiscal year
- Automatic third-party insurance billing with multiple insurance companies for each patient, using preprinted insurance forms approved by the AMA Council on Medical Service
- Direct, paperless transmission of insurance claim data to Medicare/Medicaid and Blue Cross/Blue Shield by telephone modem connection (only in states where this is possible)
- Management and productivity reports
- Scheduling — appointments more than 1½ years in advance can be set up and retained, with daily or weekly schedules printed
- Instant, on-screen access to patient records, with display of patient name, address, phone number, billing status, and location in hospital, if applicable
- A data base report generator that allows sorting by any item in the patient data base
- Payroll computation, with payroll check writing and compilation of data to prepare government payroll reports
- Text processing, chart labels, and mailing labels
- Compatibility with a vast library of application software
- Telephone modem for remote access to system, included with software maintenance contract
- An easy, reliable method for backing up patient data

A version of this product is available for the PDP–11 computer.

Price: $5000 – $30,000

Contact: Richard J. Barton II
(512) 690–9062
TEXAS PROCESSOR INC.
4107 Gardendale
San Antonio, TX 78229

PASS (Payroll and Staffing System)

Operating System: VMS

Keywords: • Employment • Payroll • Statistics

Developed for health care facilities, PASS features fringe benefit accruals, overtime reports, full-time equivalency (FTE) calculations, and customized reporting for union-based welfare and pension funds. This system can be integrated with a computer-based timekeeping and attendance system, which is available separately. PASS is fully integrated with PINS (Personnel Information System), which includes a wide variety of reports and data collection required by various federal and state agencies.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

PathNet

Operating System: VMS
Keywords: • Cost accounting • Data collection • Information management • Medical

This unique laboratory information system encompasses the information requirements for hospital and independent medical laboratories. PathNet incorporates direct computer interfaces to collect results on line from automated laboratory instruments, to collect patient demographic information from hospital information systems, and to communicate results to the patient care unit.

A complete cost accounting system develops cost for each test and compares actual costs to standard costs.

PathNet produces monthly management reports: utilization reports ranked by physician, medical service, and frequency of ordered tests; complete financial operating statements; workload reports that meet CAP guidelines; and performance reports.

Price: Available upon request
Contact: Jeanne M. Lillig
(816) 221–1024 or (800) 622–1024
CERNER CORP.
2800 Rockcreek Parkway, Suite 601
Kansas City, MO 64117

Pathology Billing

Operating System: VMS
Keywords: • Billing • Medical • Statistics

Distribution media: 9-track 1600 bpi magnetic tape, TU58 DECtape II cartridge.

Pathology Billing provides the statistics, billings, and reporting for laboratories that bill to individual patients and/or to doctor or hospital groups. The system components are interactive, friendly, and complete — for an in-house or a time-share system.

A version of this product is available for the PDP–11 computer.

Price: $20,000 – $24,000
Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

Patient Accounting Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Accounts receivable • Billing • Financial analysis • Report writer

Distribution medium: disk.

This module, written in COBOL, facilitates accurate patient and third-party billing and efficient cash collection. This application provides real-time patient account and financial account reviews and collection monitoring and allows user-defined parameter-driven dunning and patient statements. Receivables management is facilitated with on-line financial account search and inquiry, multiple account-aging techniques, real-time transaction posting, and automatic GL interface. Additionally, the software provides on-line patient and guarantor search, processes an unlimited number of insurance plans and coverages, and produces fully prorated demand bills, integrated grouper/pricer for DRGs, and mail-ready bills. Complete audit trails and interface with spreadsheet assist in revenue analysis. The system features a full range of on-demand reporting.

Price: Available upon request
Contact: David H. Shor
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Patient Accounting System

Operating System: VMS
Keywords: • Accounts payable • Dental • Medical • Scheduling

The Promedics Patient Accounting System provides for all the functions of a medical or dental office, including audit trails, statement and insurance form generation, management reporting, accounts receivable, patient recall and scheduler, and electronic claim submission. Minimum hardware configuration of 10-megabyte storage provides for 7500 patients and 75,000 transactions.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $25,000
Contact: Robert Brehm
(415) 961–2401
PROMEDICS DATA CORP.
2432 Charleston Road
Mountain View, CA 94043

Patient Information and Billing System

Operating System: VMS
Keywords: • Billing • Financial analysis • Medical

This package provides a comprehensive patient information system in which demographical, medical, diagnostic, financial, and hospital data from admissions through discharge is recorded and retained for short- and long-term reporting. The capabilities are designed to meet the needs of small to medium-size hospitals, home health agencies, clinics, and large medical groups.

The system features automatic generation of daily charges from censuses; flexible coding schemes; automatic pricing; segmented and consolidated reporting; recording of referrals and preadmissions; third-party billings, including UB–82; retention of historical data; daily, monthly, quarterly, and annual reports; and medical, statistical, and financial records.

The system may be operated in a multiterminal/multilocation environment and is written in BASIC–PLUS–2.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Wayne Abbott
(404) 882–9226
ABBOTT, JORDAN AND KOON
202 W. Haralson Street
Lagrange, GA 30240

Patient Management System: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Data base management • Order entry • Scheduling • Statistics

Distribution medium: disk.

This system, written in COBOL, maintains a massive data base of patient demographic and historical information. This comprehensive data base drives ADT/census, OP and ER registration, use review, DRG grouper/pricer, medical records, nursing care, order communications, and OP scheduling. Completely interactive, the modules ensure accurate retention and distribution of patient data to all departments. The system allows automatic preregistration, transfer of charges and demographics, ICD9–CM descriptions, multiple diagnosis and code

entry, automatic assignment of patient account numbers, complete validation of fields at time of entry, guarantor's data base, and an interface to embossers and financial and clinical systems.

Price: Available upon request

Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Payables

Operating System: VAX DSM, VMS
Keywords: • Accounting • Accounts payable

This product is written in ANSI standard MUMPS and runs on DIGITAL micros, minis, and VAXs. This table-driven product creates and produces payables checks as well as provides for the complete control of payables. This system allows you to take discounts when they are most advantageous as well as to distribute your payables to various general ledger accounts.

A version of this product is available for the PDP–11 computer.

Price: $2415 – $13,282

Contact: Richard R. Brink
(214) 422–1022
ANTRIM CORP.
101 E. Park Boulevard, Suite 855
Plano, TX 75074

Payroll

Operating System: VAX DSM, VMS
Keywords: • Payroll

This product is written in ANSI standard MUMPS and runs on DIGITAL micros, minis, and VAXs. This table-driven product provides the necessary processing of payroll for salaried and hourly employees; handles multiple corporations, credit union deductions, and employee loans; and automatically creates tax deposit checks as well as other required filing forms and lists.

A version of this product is available for the PDP–11 computer.

Price: $2415 – $13,282

Contact: Richard R. Brink
(214) 422–1022
ANTRIM CORP.
101 E. Park Boulevard, Suite 855
Plano, TX 75074

Payroll Module: Leadership Series™

Operating System: MicroVMS, VMS
Keywords: • Payroll • Personnel • Report writer • Security
Distribution medium: disk.

This real-time, completely interactive software with multiple organization, company, facility, or division definition capability is written in COBOL. Each defined entity can have a unique processing schedule provided weekly, monthly, biweekly, semimonthly, quarterly, and annually. Specifically designed for the needs of the health care industry, Payroll allows preliminary check processing, on-line control directories, user-controlled retention of historical data (retrievable on line), and labor cost distribution.

Price: Available upon request
Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

PFS (Patient Funds System)

Operating System: VMS
Keywords: • Accounts receivable • Financial analysis

Fully integrated with PAIS (Patient Accounting and Information System), PFS tracks patient allowances under Medicaid for long-term care facilities required to maintain separate accounts for patients' own funds. PFS is automatically keyed off from Medicaid accounts receivable.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

Pharmacy

Operating System: VMS
Keywords: • Billing • Medical • Pharmaceutical

This system collects and verifies customer information at the point of sale; performs and records all Rx information, functions, and printing; and provides activity reports to help manage your business and growth. Reports include Rx activity, patient yearly statements for tax or insurance needs, and more.

The system provides features for patient registration, prescription processing, a doctor's file, a price file, drug warning labels, and sig and phrase translation. Rx inventory management, generic and brand-name cross-references, third-party claims, and accounts receivable are included as well.

This system is suited to nursing homes. Administrative functions, such as nursing home billing with patient detail, are covered. RPH functions, such as sorting batch labels by home, patient, location, or drug, are provided too.

A version of this product is available for the PDP–11 computer.

Price: $7500

Contact: Jon Springer, President
(617) 828–1529
WORLD–WIDE COMPUTER RESOURCES
127 Tolman Street
Canton, MA 02021

Pharmacy Module: Leadership Series™

Operating System: MicroVMS, VAX DSM, VMS

Keywords: • Billing • Data base management • Pharmaceutical • Statistics

Distribution medium: magnetic tape.

The Pharmacy Module, written in MUMPS, permits the pharmacist to control management of medications, documents the patient medication history for the physician, and facilitates more efficient administration of medication by the nurse. Pharmacy also produces a daily medication profile for each patient. Upon request by the pharmacist, the computer prints labels for the medication orders. The system provides monthly drug usage statistics, based on doses of medications by drug, nursing unit, physician, and total hospital. In addition, Pharmacy automatically generates charges for regularly scheduled patient medications and allows for additional charges or credits as necessary. Numerous reports are available throughout the system. The Pharmacy application is also available as a stand-alone system.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: David H. Shor, Director, Sales and Marketing
(215) 691–3616
PENTAMATION ENTERPRISES, INC.
One Bethlehem Plaza
Bethlehem, PA 18018

Physician Systems

Operating System: M (MUMPS), VMS
Keywords: • Accounting • Billing • Forecasting • Scheduling

IDS software applications include Billing and Accounts Receivable, Patient Scheduling, Paperless Collection, General Ledger, Accounts Payable, and Financial Forecasting. IDS has serviced the medical community since 1969, providing services to physician group practices, hospital clinics, and university-affiliated-practice plans. Innovations introduced by IDS include open-item posting, profile monitoring, automatic claims tracing, and user-defined management reports. All IDS systems are real time and integrated and are offered on both a time-sharing and a stand-alone basis.

A version of this product is available for the PDP–11 computer.

Price: Available upon request
Contact: Robert Galin
(617) 566–6800
INTERPRETIVE DATA SYSTEMS, INC.
882 Commonwealth Avenue
Boston, MA 02215

PLAN–32

Operating System: VMS
Keywords: • Graphics • Medical

Memory required: 0.25MB. Distribution media: 1600 bpi magnetic tape, RL02.

These programs, written almost entirely in Pascal for computer-assisted planning of radiation therapy for cancer, use high-resolution color graphics and state-of-the-art software design. Capabilities include external beam planning for both photon and electron treatments and for intracavitary and interstitial sources. Plan information and dose distributions are shown on a color graphics display, together with display and manipulation of computed tomography (CT) images. The high-resolution display can simultaneously show multiple plans and CT images. Printed output can be produced on any printer, plotted output is available on an 8-color pen plotter, and input can be done from the CT image display or a digitizing tablet.

Multiple workstations are supported. The software can run simultaneously with any other VAX/VMS–based software, including word processing, data base, and other products. A comprehensive capability for entry of beam data and generation of dose tables for brachytherapy sources is also included.

The software requires 2500 disk blocks for the programs and about 50 to 100 blocks for supporting data. Thousands of treatment plans can be stored on line, even on a moderate-size system.

Price: $39,500
Contact: Toni Spady
(206) 454–5255
ONCOLOGY SYSTEMS, INC.
1400 112th Avenue SE, Suite 100
Bellevue, WA 98004

Practice Management System

Operating System: VMS
Keywords: • Accounting • Billing • Information management • Medical

Practice Management System is a complete billing, accounting, claims preparation, and medical management system for physicians. This flexible, easy-to-use system provides everything a doctor needs to automate patient financial histories, accounts receivables, and cross-reference information.

A version of this product is available for the PDP–11 computer.

Price: $3000 – $4500
Contact: Paul Balcerzak
(614) 766–0204
CORTRON CORP.
1998 Tewksbury Road
Columbus, OH 43221

PRN–1 Pharmacy Package

Operating System: VMS
Keywords: • Billing • Inventory • Pharmaceutical

PRN–1, designed by a registered pharmacist and written to handle all aspects of pharmacy procedure, can be customized to meet specific needs and modified to meet each state's individual requirements. PRN–1 can fill and refill prescriptions, create labels, warn the pharmacist of drug interactions, show generic substitutions, and maintain patient profiles. The system contains a 3500-item drug file to which the pharmacist can add drugs as needed. The system can control both drug and nondrug inventories. All third-party billing is provided by PRN–1 and customer statements are printed for private charge customers.

Reports generated by the system include a daily transaction report, monthly drug-usage report, Schedule II reporting on controlled drugs, and individual patient prescription purchases year to date.

The optional Nursing Home module manages the dispensing of prescriptions to each home. That module uses a batch refill program to speed the process of refilling a large number of prescriptions at a time. The optional Medicare module provides for the rental of Medicare durable goods. Other options, such as accounts payable, general ledger, payroll, and word processing, are also available with PRN–1.

A version of this product is available for the PDP–11 computer.

Price: $6000 – $12,000
Contact: Stephanie Miller
(717) 569–5733
EASTERN SYSTEMS MANAGEMENT, INC.
1585 Commerce Drive
Lancaster, PA 17601

RADIO–OSCAR

Operating System: VMS
Keywords: • Chemical • Inventory • Nuclear • Security

This on-line system for the control of radioactive chemical stores provides radiochemical laboratory managers with an accurate record of all current stock, together with a detailed usage history. The system is simple to use and operates by a series of question-and-answer sequences using a visual display unit and keyboard. Information is retrieved from data files instantaneously for inspection on the VDU screen or may be printed on a line printer. The total activity held in the stores is known at all times, and thus legal requirements can be accurately monitored.

Individual records are stored in the data base for each isotope, incorporating a reference code, description, and half-life or decay constant. Associated with each isotope are all the individual stock records for which the data base records a reference number and additional reference data, a description, units of measure, quantity on hand, specific activity at a given date, purity information, and computed activity derived from the quantity on hand. Also held for each stock item are up to 60 dated and initialed stock movements showing the quantity and activity issued.

A version of this product is available for the PDP–11 computer.

Price: £3000 – £6000
Contact: R. A. Stock
(0734) 699777
D. M. ENGLAND & PARTNERS LTD.
Lytham Court, Lytham Road
Woodley, Reading
Berkshire RG5 3PQ
England

Radiology Billing

Operating System: VMS
Keywords: • Billing • Medical • Statistics

This on-line interactive system is designed to perform billing functions and statistics collection. The system is particularly useful when charges for a patient are accumulated until the patient is discharged (from minutes to an indefinite period of time after start). A statement

for services is prepared under a unique account number. If that person enters the system again for additional services, billing and statistical information is treated as another unique case.

The system is suited for a stand-alone operation or a time-sharing environment.

The programs occupy 2600 blocks. Each account number in the patient master file requires two blocks, and each test in the test master file occupies one-half block.

The Radiology Billing system accepts data from other computers; is menu/table driven; alphabetizes master file lists and reports; handles Medicare, Medicaid, Blue Cross, and/or standard insurance forms; and performs comprehensive trails, active patient lookup, complete bill handling, and statistical reporting.

A version of this product is available for the PDP–11 computer.

Price: $9000 – $15,000

Contact: Nathan I. Lieberman
(812) 479–6951
EVANSVILLE DATA PROCESSING CORP.
1010 S. Weinbach Avenue, P.O. Box 2469
Evansville, IN 47714

RDB (Regenstrief™ Data Base Utility)

Operating System: VMS

Keywords: • Data base management • File management • Pharmaceutical • Text management

Distribution media: RX01, TU58 DECtape II cartridge.

This package, developed by Regenstrief Institute for Health Care, 1001 West 10th Street, Indianapolis, Indiana 46202, creates, manages, and manipulates computer data files. RDB is a prerequisite for the Regenstrief Pharmacy system and works with data base files by editing, sorting, storing, and retrieving the files so that complex sequences can be defined and executed. The RDB Utility packs information network file structures, provides an interface to the batch and spooling package, and allows the pharmacy and the manager to develop new features without writing BASIC programs.

DIGITAL distributes this software product under license from Regenstrief Institute for Health Care.

Refer to SPD #A0.11.xx when requesting further information on this product from your local DIGITAL sales office.

Regenstrief™ is a trademark of Regenstrief Institute for Health Care.

Price: $5000

Contact: Consult your local DIGITAL sales office (see Introduction).

REMS (Radiation Exposure Management System)

Operating System: VMS
Keywords: • Information management • Medical • Nuclear

REMS, based on INGRES, a fourth-generation relational data base management system, is a set of integrated programs dedicated to dosimetry organization and report generation. REMS simplifies monitoring of personnel and their exposure as related to tasks and specific RWPs. In addition, report generation to answer Reg. Guide 1.16, Appendix A, 10 CFR 20.407, FORM–4, FORM–5, and others is easily achieved through simple English dialog and menu-driven routines.

REMS supports a comprehensive data base that encompasses employees, subcontractors, internal/external exposure, RWP definition, and ALARA information. Further enhancements and labor savings may be achieved by using the optional automatic input packages for access control, body burden analysis, and automatic TLD reader input. Written in FORTRAN, this package provides data security and integrity through security file, journaling, and audit reports.

Price: $150,000
Contact: Robert M. Loesch
(203) 238–2351 ext. 352
CANBERRA INDUSTRIES, INC.
1 State Street
Meriden, CT 06450

RPS (Regenstrief™ Pharmacy System)

Operating System: VMS
Keywords: • Data collection • File management • Pharmaceutical • Report writer

RPS, developed by Regenstrief Institute for Health Care, 1001 West 10th Street, Indianapolis, Indiana 46202, is a data collection mechanism for the RDB Utility package. RPS facilitates prescription processing by accepting prescription orders, providing range checks to prevent excessive dosing, computing the amount of drug to dispense and the optional package size, generating prescription labels, and maintaining on-line profiles for the patient.

Drugs can be identified by name or abbreviation and code. RPS accepts the instruction written by the physician — for example, one tab T.I.D. — and translates it into layman's terms — for example, take one tablet three times a day.

RPS serves inpatient and/or outpatient pharmacies. The system assists the administrative and management tasks of the pharmacy, including pricing and maintenance of the pharmacy formulary file, patient registration file, active physician file, and generation of special reports, such as work load by the time of day.

DIGITAL distributes this software product under license from Regenstrief Institute for Health Care.

Refer to SPD #A0.12.xx when requesting further information on this product from your local DIGITAL sales office.

Regenstrief™ is a trademark of Regenstrief Institute for Health Care.

Price: $5000

Contact: Consult your local DIGITAL sales office (see Introduction).

RxCom

Operating System: Independent

Keywords: • Data base management • Information management • Inventory • Pharmaceutical

This complete pharmacy management system provides medication dispensing, administration, billing, clinical review information, inventory control, and so on. Drug-to-drug, drug-to-food, drug-to-allergy, drug-to-OTC, and drug-to-disease interactions are flagged to the ingredient level. RxCom is a complete turnkey single-vendor product consisting of hardware/hardware support and software/software support. Installation and postinstallation support are offered. Varied consulting, training, and client services support can be provided on request.

A version of this product is available for the PDP–11 computer.

Price: Available upon request

Contact: Ford R. Phillips
(314) 232–9861
MCDONNELL DOUGLAS HEALTH SYSTEMS
Health Services Division
5775 Campus Parkway
Hazelwood, MO 63042

RxEXPRESS

Operating System: VMS

Keywords: • Medical • Pharmaceutical

The RxEXPRESS is an affordable pharmacy computer system designed for the retail, nursing home, or hospital pharmacy. The system streamlines prescription filling, accelerates third-party billing to improve cash flow, and controls inventory — from drugs to sundries and perishables. The RxEXPRESS eliminates paperwork and increases efficiency.

The system features label and receipt printing, unlimited pricing methods, accurate third-party billing, automatic drug price updating, patient histories, doctor profiles, a data base of more than 70,000 drugs, drug-to-drug interaction, drug-overuse indication, I.V. incompatibilities, nursing home distribution, instant sales reports, POS interface, accounts receivable, payroll, general ledger, accounts payable, hospital version, 64-color combination CRT, color graphics sales analysis, voice entry/response, and more.

A version of this product is available for the PDP–11 computer.

Price: $19,500 – $100,000 +
Contact: C. W. Pautsch
(312) 325–1800
COMCOTEC, INC.
825 N. Cass Avenue
Westmont, IL 60559

RXS (Pharmacy System)

Operating System: VMS
Keywords: • Accounts receivable • Billing • Medical • Pharmaceutical

Designed to support an in-house pharmacy for health care facilities, RXS generates doctors' orders, treatment plans, and a medication administration record (MEDEX/MAR). RXS updates a patient profile from a common data base used by PAIS and MRS, contains drug interaction tables and allergy/contraindications, prints labels with precautionary warnings, and updates prices automatically.

A full system is available separately for retail pharmacies and contains all the above, as well as additional record-keeping and billing features and a full accounts receivable module, with retail customers kept separately from nursing home receivables. Optional modules for A/P, payroll, and G/L are also available.

A version of this product is available for the PDP–11 computer.

Price: $7500
Contact: David M. Pollack
(914) 423–3623
ADL DATA SYSTEMS, INC.
50 Stratton Street South
Yonkers, NY 10701

Social Services Statistical Reporting System

Operating System: VMS
Keywords: • Billing • Government • Report writer • Statistics

This statistical reporting/tracking system, designed for social service agencies funded in whole or in part by outside agencies and client billing, consists of Client Intake/Statistical Reporting, Accounts Receivable/Client Billing, and Accounting. The system allows single entry of information on families, extended families, or multiperson groups. The system allows a client to be enrolled in multiple agency divisions, such as psychological counseling and crisis pregnancy, without duplication of agency records.

Caseworker assignments are integrated to produce reports, including caseload count, cost analysis, and so forth. Agency reports to funding sources — for example, "United Way Summary of Agency Beneficiary Statistical Report" — thus eliminate manual case count. The Accounts

Receivable/Client Billing section provides open-item or balance-forward client charges based on a sliding-scale fee based on annual income, a variable amount, a fixed amount based on type of service, or a no-charge. All detail is retained until the client is purged, thereby allowing tracking of a client's entire billing history and aging by client, caseworker, or agency division.

Statistical auditing reports listing case number, client name, and caseworker can be run to substantiate all statistical reports. All three modules are integrated into DIBS–11 G/L.

A version of this product is available for the PDP–11 computer.

Price: $7000 – $10,000

Contact: Jim Baker
(404) 256–3067
AMERICAN DIGITAL PRODUCTS CORP.
5775-B Glenridge Drive N.E., Suite 320
Atlanta, GA 30328

Sunquest Laboratory Information Systems Flexilab

Operating System: M (MUMPS), VAX DSM, VMS

Keywords: • Biology • Instrumentation • Medical

The Sunquest system, written in ANSI MUMPS, supports such laboratory departments as microbiology, blood bank, and anatomic pathology/cytology, with the full functionality expected in the new generation of advanced laboratory systems. Extensive capabilities to interface various central computer or hospital information systems are available at nominal costs. Similarly, interfaces to most laboratory instruments have been established through PDP–11/23–based instrumentation subsystems. Each subsystem supports up to 20 instruments and provides both efficient processing of automated test data and backup capabilities for data retention.

A version of this product is available for the PDP–11 computer.

Price: $100,000 – $700,000

Contact: Dennis Winsten
(602) 885–9056
SUNQUEST INFORMATION SYSTEMS
8835 East Speedway, Suite F
Tucson, AZ 85710

Synergy Health Care System

Operating System: VMS

Keywords: • Accounting • Financial management
• Information management

This turnkey, on-line, real-time system is written in VAX–BASIC and functions in the following hospital information-processing areas:

- Patient management: admitting and census, outpatient and emergency room registration, bed control, master history file, and master record index
- Patient accounting: patient billing, accounts receivable, proration/COB, and DRG grouping/billing
- Patient data: case mix analysis, medical record abstracting, revenue logs, and utilization review
- Hospital finances: general ledger/financial reporting, payroll/personnel, accounts payable, cost allocation, fixed assets, budgeting/modeling, and inventory control/purchasing
- Patient care: base order entry, pharmacy and medical charting, ancillary order control and reporting, nursing care support, and nurse staffing

Price: $150,000 – $700,000
Contact: Charles H. Bloom
(415) 444–3434
COMPUTER SYNERGY, INC.
2201 Broadway
Oakland, CA 94612

TMR® (The Medical Record)

Operating System: VMS
Keywords: • Accounting • Data base management • Medical • Scheduling

TMR is a comprehensive medical record system that includes management, financial, and medical functions. The dictionary-driven system does not require additional programming. The dictionary also makes TMR fit any medical or dental setting — from solo practitioners to clinics to hospitals. Data may be viewed in time-oriented, problem-oriented, and encounter-oriented formats. The system supports on-line graphs and protocols and can be used as a chartless system. A wide variety of user reports can be produced. The appointments portion can provide multiple time slots, clinic profiles, practitioner profiles, overbooks, scan forward or backward, and holding file. Installations include a 2-person OB/GYN practice, a 72-person multiple practice, and a 60-bed cancer hospital.

A version of this product is available for the PDP–11 computer.

Price: $25,000 – $120,000
Contact: Lois Funderburk
(919) 383–5000
DATABASE, INC.
P.O. Box 3054
Durham, NC 27705

UMS (Utilization Management System)

Operating System: ULTRIX–32
Keywords: • Forecasting • Medical • Property management

Memory required: 512KB. Distribution medium: 1600 bpi magnetic tape.

UMS, written in C, enables a utilization review department in a hospital to concurrently review resource consumption and patient length of stay. UMS provides daily review sheets for each patient; assigns a preliminary diagnostic related group (DRG), which includes a reimbursement figure and an average length of stay; and compares length of stay against a national data base. UMS also forecasts clinical events to ensure timely scheduling and to avoid delays in treatment and highlights any inconsistencies in the entry of diagnostic information and in possible delay factors for a timely discharge.

Price: $20,200
Contact: Mark Engelhardt
(203) 562–2101
HEALTH SYSTEMS INTERNATIONAL
100 Broadway
New Haven, CT 06511

Vet System/2000

Operating System: VMS
Keywords: • Accounting • Medical • Payroll • Word processing

This package provides patient history similar to Visi Record Card, automatic generation of shot reminders, client history, drug disbursements, sales analysis, accounts receivable, billing, accounts payable, general ledger, payroll, and word and list processing.

A version of this product is available for the PDP–11 computer.

Price: $2000 – $20,000
Contact: Andrew Yasenchak
(201) 231–9400
UNITRONIX DATA SYSTEMS, INC.
50 County Line Road
Somerville, NJ 08876